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THE FUTURE of the GRAND MESA - UNCOMPAHGRE - GUNNISON NATIONAL FORESTS in the YEAR 2030

PREDICTION OF RECREATIONAL RESOURCE USE

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Clemson, South Carolina
March 30, 1987

DISCLAIMER NOTE

This paper was prepared as a student project in partial fulfillment of the requirements of the Professional Development for Outdoor Recreation Management Program at Clemson University. It in no way reflects USDA Forest Service policy, nor are the opinions expressed those of anyone other than the author.

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ABSTRACT

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Title: Predicting the Future of the Recreation Resource on the Grand Mesa, Uncompahgre, and Gunnison National Forest.

Abstract: One of the most important natural resources on the Grand Mesa, Uncompahgre, and Gunnison National Forest is its recreational resource. As each year goes by, it is becoming more and more apparent exactly how important this resource is to the general public, and its great economic importance to the welfare of the towns and communities surrounding the Forest. The Grand Mesa, Uncompahgre, and Gunnison National Forest has been receiving more and more recreational visitors for the past several years. These visitors are unintentionally putting more and more environmental pressures on the Forest's recreational resource base.

In order to better manage the escalating recreational visitor impacts to the forest, this report will project a possible futuristic situation. It is the feeling of the author that it is better to have the fate of the forest structured by visions of the future rather than the vagaries of the present.

This report is based upon an examination of data on current trends and projections affecting the outdoor recreation field. These trends were then analyzed in an effort to hypothesize a futuristic situation on the forest in the year 2030. The year 2030 was arbitrarily chosen because it is in the distant future. It is not the intent of this report to look into the immediate future (five or ten years down the road). Many aspects of this predicted "future forest vision" are based on studies, findings, or initiatives being developed today on the Grand Mesa, Uncompahgre, and Gunnison National Forest.

The primary goal of this report is to try and stimulate creative thoughts and/or ideas in regards to the future of the recreation resources on the Grand Mesa, Uncompahgre, and Gunnison National Forest. The secondary goal is to hopefully stimulate ideas regarding the recreation resources on other forests as well.

EXECUTIVE SUMMARY

Title: Predicting the Future of the Recreation Resources on the Grand Mesa, Uncompahgre, and Gunnison National Forest.

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Summary:

The Grand Mesa, Uncompahgre, and Gunnison National Forest, like most units in the Forest Service, is experiencing increasing use of its recreation resource bases. The purpose of this report is to offer as well as stimulate some creative insights and thoughts into effectively dealing with this phenomenon. This project is based upon the collection of current trends data and projections affecting the outdoor recreation field. These trends and projections have been analyzed in an effort to hypothesize a futuristic situation on the forest in the year 2030. It is hoped that the development of future management for the recreational resources on the Grand Mesa, Uncompahgre, and Gunnison National Forest may benefit from this effort.

The following steps were taken to obtain information and develop the project:

1. Information and data in this office were collected.
2. Literature searches were performed.
3. People in this office and on the districts were interviewed.
4. People outside the Forest Service were interviewed.
5. Personal hypotheses were applied.

The methodology used to delve into the future included:

1. Analysis of the historic recreational influences on the Forest.
2. Review of the current situation affecting recreation on the Forest.
3. Analysis of the current trends and projections pertaining to the outdoor recreation field.
4. Predicting a futuristic situation based on the analysis of the collected data and interviews.

The results of the analysis were used to formulate a hypothetical futuristic situation on the forest in the year 2030. Foretelling future events is impossible; therefore, the measurement of results is equally infeasible. The only thing the author can predict for sure is that whatever he predicts will be wrong. However, attempting to accurately predict the future is neither the result nor the intention of this report.

Because of the nature of the upcoming demands on the recreation resources on the Grand Mesa, Uncompahgre, and Gunnison National Forest, it will be necessary to formulate some creative strategies and thoughts to deal with this issue. It is recommended that the forest utilize this report by distributing it to all forest personnel who are involved in the recreation field. Hopefully in their reading of this report, they will pull out some ideas and thoughts which may be applicable to their jobs. This report could be distributed to other agencies - state, federal, or private, and used by their recreation people. If just one or two ideas are sparked by this report, the intention of this report will be accomplished.

CHAPTER I

PURPOSE OF THIS PAPER

The main underlying purpose of this report is to stimulate thought about the future of the recreation resources on this forest as well as on other forests. The author felt this could best be done by projecting a hypothetical situation addressing recreation on the forest in the year 2030. This futuristic situation is based on current trends and projections occurring with the outdooor recreation field today. However, in dealing with this futuristic situation, the author has decided to look beyond the present day budget and legislature constraints in order to not restrict his imaginative concepts.

As stated in the Absract, it is not the intent of this paper to look into the immediate future but rather to look into the distant future. It is hoped that by looking into this "distant future", that this will spawn some fresh ways of thinking and new ideas concerning the recreation resources on this forest.

CHAPTER II

LITERATURE REVIEW

WESTFORNET Library (Western Forestry Information Network) - located at the Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado. This organization has access to most major library systems in the United States through their automated data system. Several documents and literature references were generated by this search and proved very useful in researching this paper.

U.S.D.A. Library (Grand Mesa, Uncompahgre, and Gunnison National Forest) - located at the Forest Headquarters office in Delta, Colorado. Several books, brochures, and documents were located at this library and were found to be useful in conducting the research.

City of Delta Public Library - located in Delta, Colorado. Delta is not a large community. Consequently, the library's catalogue of literature relevant to this research is limited. However, through their interlibrary loan system, most current books and periodicals in print can be located and are available for borrowing. By using their "books in print index" one can request books from other public, private, and university libraries throughout the United States.

Clemson University Outdoor Recreation Shortcourse - located in Clemson, South Carolina. Several suggested readings mentioned throughout the duration of the shortcourse were followed up on and led to key literature references used in the writing of this report. Of particular value were some of the suggested readings offered during the "Woods Institute" talk were helpful.

ACKNOWLEDGEMENTS

Many people have been involved in the formation and shaping of ideas used in this report. The author wishes to thank them all for having patience with his incessant questions about the subject.

The author also wishes to thank Ginna McLellan for giving him the encouragement and confidence to work on the project in spite of its uncharacteristic nature for this class. In addition, the author wishes to thank Ray Evans, Forest Supervisor on the Grand Mesa, Uncompahgre, and Gunnison National Forest, for giving him final permission and encouragement to work on the project.

CHAPTER III

METHODOLOGY

(research methods)

Four basic steps were followed in researching this project:

The first step involved a historical background research involving the recreation resources of the Grand Mesa, Uncompahgre, and Gunnison National Forest. The author felt that in order to do a practical job in portraying the recreational future of the forest, one needs to know something of its past. This recreational heritage of the forest proved to be of value later on in predicting some future recreation conditions.

The second step involved the collection of recreation-use trends and projections from various sources. These sources included written reports and documents as well as oral interviews with people knowledgeable in that particular field. Special emphasis was placed on collecting data which had far-reaching implications for the year 2030. These recreation-use trends data was then analyzed and reviewed for how its content would relate to this particular forest.

The third step involved the formulation of some assumptions concerning the future. To speculate in the far distant future (year 2030). the author felt that assumptions had to be made in order to theorize on certain ideas and thoughts.

The final step was to predict a hypothetical futuristic situation concerning the recreation resources on the forest in the year 2030. This futuristic situation was based on the research completed in the first three steps of this methodology.

CHAPTER 1

THE PAST

ANCIENT PAST (150,000,000 B.C. - 20,000 B.C.)

"In order to look at the future, we need to know of the past".
Gautama Buddha

The Forest* landscape as it exist today in west central Colorado has existed in its present form (Rocky Mountain Forest type) for approximately 20,000 years. Prior to this, approximately 50,000 years ago, this same landscape would have been hardly recognizable due to massive glacial activity in the high country. Going back even further in time, approximately 150 million years ago, this same area was part of a great inland sea with lush tropical vegetation and large reptilian creatures dominating the landscape (Chronic, 1980). Fossilized bones of several different types of dinosaurs have been discovered and documented at the Dry Mesa Quarry site located on the Uncompahgre National Forest (Ostrom, 1987).

Changes in the Forest environment used to occur geologic time periods. Within the past 100 years, changes have begun to occur over much smaller time periods.

Part of the purpose in writing this report is to anticipate and attempt to keep pace with this change. By planning ahead for the future we become better prepared to both deal with and influence the shape of change.

*For purposes, of this report, the word Forest always refers to the lands administered by the Supervisor's Office of the Grand Mesa, Uncompahgre, and Gunnison National Forest.

EARLY HUMAN INHABITANTS (20,000 B.C. - 1200 A.D.)

Archeologists generally believe that man has occupied west central Colorado for approximately 10,000 years. The prehistoric inhabitants had very little impact on the forest environment. This was partly due to their low population densities and the migratory nature of their life style (Reed, 1984).

Very little is known about the social behavior of these ancient peoples, especially about their spiritual or recreational uses of the forest environment.

UTE INDIAN OCCUPATION (1200 A.D. - 1881)

Many anthropologists believe that the Ute Indian appeared in this region of Colorado around 1200 A.D. (Reed, 1984). The Utes lived in bands near the forest and used the forest resources of the area from approximately 1200 A.D. to 1800. The Ute population of west central Colorado was never very large. One estimate concludes that there were approximately 2,000 Ute Indians living in this area in 1840 (Pettit, 1982).

The Ute Indians used the forest environment for a number of activities, some of which could be construed to be recreational in nature. These activities included:

--Hunting big game animals
--Hunting and trapping small game
--Trapping and spearing fish
--Gathering edible food plants
--Gathering berries, roots, seeds, and nuts.
--Gathering herbal and medicinal plants.
--Gathering firewood.
--Going on spiritual vision quests.

The Utes probably did not think of the above mentioned activities as recreational, as we define the word today, but regarded them as survival activities for every day chores. However, the last mentioned activity, the vision quest, qualifies as a spiritual or religious activity. This activity consisted of spending several days alone at a vision quest site, usually located in a cave or rock enclosure on a cliff or mountain top. These sites were designed to have a broad panoramic view of the landscape below. While at the site, the vision seeker would go without food for several days to induce a spiritual dream or vision. These religious experiences of the Utes are similar to our modern day recreational excursions to the woods for spiritual rest and relaxation of the mind. Webster (1976) defines recreation as, refreshment of one's strength and spirit after toil.

The last Ute reservation in west central Colorado included all of the present-day Grand Mesa, Uncompahgre National Forest and the western half of the Gunnison National Forest (Fay, 1970). A government treaty council in 1880 forced the Utes to sell all their lands in western Colorado (Smithsonian, 1986). The Utes continued to use the forest and its products up until just over one hundred years ago. In 1881 they were expelled from western Colorado. It is interesting to note that by 1881 many of the natural resources of the eastern United States had already been plundered by civilization. Western Colorado was one of the last frontiers to be settled and civilized in the lower 48 states. In essence, the proximity of the Ute Indian Reservation, plus the remoteness and aridity of the landscape, are major reasons why this Forest has not been developed and tamed more than it already has (trespassers onto the Ute Indian Reservation sometimes ended up being killed). As late as the 1880's most of what would become the Grand Mesa, Uncompahgre, and Gunnison National Forest remained undisturbed.

In conclusion, the Ute Indian activities on the Forest apparently had very little overall impact on Forest resources. In large part, this is because their population densities were very low, approximately 2,000 Indians living on 20,000 square miles of land or one Indian for every ten square miles, and also because their activities were not concentrated due to their nomadic life style. Knowingly or unknowingly, the Utes practiced a type of rest-rotation on the landscape and essentially lived in balance with their natural surroundings. The Indians "harmony" with their environment at the time when the white men penetrated their territory has been a subject of interest and speculation to the world for many decades (Pettit, 1982).

CONTEMPORARY RECREATION (1881 - 1986)

After the last remaining Utes were evicted from their western Colorado homeland in 1881, there was a massive influx of white settlers into this region. By the 1890's numerous roads, trails, and railroad lines had been developed, thus opening up the country for settlements and other developments. In the 1880's and 90's, hunting and fishing were two of the more dominant activities on the Forest. Early settlers probably considered hunting and fishing excursions as a necessity to put food on the table, although there may have been a recreational side to these pursuits. Another major occurrence would happen to this untamed land in the 1890's, the creation of the Forest Reserves - forerunner to the present day U.S. Forest Service. At the time of the creation of the forest reserves in 1892, it has been estimated that approximately 75% of the forest would have qualified as wilderness under today's definition of the word.

Commodity-type pursuits on the Forest were some of the first activities to take place. They included: mining exploration and extraction, cattle and sheep grazing, logging, and water impoundments and ditching. Civilization was encroaching on the land in the form of towns and villages being built in the valleys below. With the advent of human settlement, recreational uses on the Forest soon followed. Some of the major contemporary recreational activities and major National events affecting these activities are highlighted below:

1890 - 1920 <u>Industrial Era, Growth of America</u>
- -hunting and trapping
- -sporting fishing
- -poaching
- -horseback riding for pleasure
- -hiking for pleasure
- -tent camping
- -pot and fossil hunting

1920 - 1930 <u>Roaring Twenties Era</u>
- -modernization and expansion of trail system
- -improvement of road network on Forest lands
- -increased use of automobiles on the Forest
- -first campgrounds were built

1930 - 1940 <u>Depression and Federal Jobs Bill Era</u>
- -Civilian Conservation Corp workers building better developed campgrounds and other recreational facilities
- -increasing use of automobile camping
- -westward migration from drought and Dust Bowl states

1940 - 1950 <u>World War II Era</u>
- -increased accessibility to the Forest
- -increased use of developed campgrounds
- -increased hunting and fishing uses
- -increased recreastional hiking

1950 - 1960 Post-War Era

-increased recreational activities on the Forest due to a more affluent and mobile society
-USA population begins to swell

1960 - 1970 Affluent Society Era

-Multiple Use - Sustained Yield Act adopted, including recreation as a management objective
-Forest Service budgets significant funding to recreational development during this decade
-increased off-road vehicle use on the forest
-invention of the recreational snowmobile
-increasing cross-country skiing use
-start of the development of downhill ski resorts
-increased driving for pleasure on Forest land
-first designated wilderness areas following adoption of the 1964 Wilderness Act.

1970 - 1980 Environmental Movement Era

-increasing leisure time and disposable income
-post war baby boomers begin to look for other values in life
-increased recreational activities on the forest in both the developed and dispersed forms
-conflict between recreation user groups starts to become more apparent
-creation of most of the present day wilderness areas and increased use of these areas

1980 - present Commodity Era

-reduced recreation budgets and staffing
-invention of 3-wheelers, 4-wheelers, and miscellaneous ATV's
-invention of mountain bicycles
-increased (right-to-risk) activities taking place on the forest
-more recreational activities occurring on the forest than in any previous decade
-conflicts between recreation users and recreation versus consumptive users increase
-concerns over extent of Public land ownership and Federal control in the West continue to grow.

CONCLUSION of CONTEMPORARY RECREATION USES on the FOREST

The Utes, Spanish explorers, and early settlers probably did not recreate on the land in the context that we think of recreating today. Theirs was more of a survival and subsistence relationship with the environment. Recreation, as we think of it today, was probably the last thing on their minds. However, it is reasonable to speculate that these peoples from the past had experienced some sense of exhilaration in tracking and hunting game, exploring new country, and absorbing the magnificent scenery. These could be considered recreational experiences in past or present terms.

For the past 20,000 years, the recreational resources on the Forest have existed by themselves without any help from man. However, within the last 100 years, the Forest has undergone some extreme changes in the recreational activities taking place within its boundaries. The rest of this report will examine current and projected trends in these activities, and then look into the possible future of recreation on the Forest.

CHAPTER 2

THE PRESENT

CHAPTER 2

CURRENT FOREST MANAGEMENT SITUATION - 1986

In order to set the stage for a more detailed treatise regarding recreation on the Forest, it is necessary to decribe the region as a whole. This Forest lies within the west central portion of Colorado which embraces that section of Colorado west of the Continental Divide. "It is truly a land of beauty and contrasts. Its beauty lies in the magnificent handiworks of nature which seem to abound on every side - the mountains cloaked in rich shades of green to brown, and topped off by jagged snowcapped peaks of the higher ranges, and the varicolored and intricately sculptured cliffs casting their shadows across the desert lowlands or upon well-watered valleys at their bases". (Young, 1977)

Physical and Biological Description

The Forest vicinity is unique for its geographic extremes. The lowest point in Colorado (about 4,300 feet) occurs where the Colorado River crosses into Utah. Less than 100 miles distant, numerous peaks in the West Elk and San Juan Mountains stretch more than 14,000 feet into the sky. Large portions of west central Colorado consist of low-lying regions of sparse vegetation which qualify as deserts, inasmuch as they receive less than 10 inches of moisture per year. However, with a moderate rise in elevation and a concurrent increase in precipitation, the vegetation becomes noticeably more lush until untimately, in the montane areas, the ground is generally covered with a thick cover of trees and grass - reflecting moisture amounts up to 40 inches per year. The human population density, too, shows pronounced imbalance. Nearly all the metropolitan areas, with their halos of intensive agriculture, are clustered along the few rivers and major creeks. The remaining remote portions of west central Colorado, however, serve as home for a much smaller number of farmers, ranchers, miners and other residents, who, either by choice or necessity, have elected to cast their lot in the less crowded areas (Young, 1977).

Present Forest Boundary

The Forest's east boundary follows the Continental Divide and the Elk Mountains. The south boundary includes the northern slopes of the San Juan Mountains and the crest of the Wilson Mountains. The west and north boundaries are formed by the Uncompahgre Plateau and Battlement Mesa.

There are 2,953,186 total acres of National Forest System land, of which the Grand Mesa (346,141 acres), Uncompahgre (944,241 acres), and Gunnison National Forest (1,662,804 acres) are comprised. All three forests were administratively combined in 1976 (USDA Forest Service, 1983).

Physical and Biological Setting

The Forest lies within the upper Colorado River drainage. Major rivers include the Gunnison, Uncompahgre, and San Miguel.

The Forest area is located astride two physiographic province the Colorado Plateau and southern Rocky Mountains. The two provinces differ greatly in landforms, rock types, landscape character. The western portion of the Forest, within the Colorado Plateau province, is characterized by high, flat top mesas and rolling plateaus bisected by sandstone canyons. The southern and eastern part of the Forest is characterized by rugged, mountainous terrain. Elevations range on the Forest itself from about 6,000 feet to peaks over 14,000 feet.

The Forest is located within the Rocky Mountain Forest Eco-Region of the Highland Province, and includes four major climatic and vegetation zones: lower montane forest, upper montane forest, subalpine forest, and the alpine vegetation. Common vegetation types at the lower elevations include sagebrush, pinyon pine, juniper, Gambel oak, and ponderosa pine. Higher elevations include Engelmann spruce, subalpine fir, lodgepole pine, Douglas-fir, and quaking aspen. The major range types include the mountain meadow, mountain bunch grass, alpine meadow, and aspen-forb plant associations.

Unforested areas consist of grassland, brushland, and alpine communities. Grassland areas occur along streams and are often interspersed with forested areas. Sagebrush and oakbrush communities are common at elevations below the forested area while alpine communities predominate above timberline.

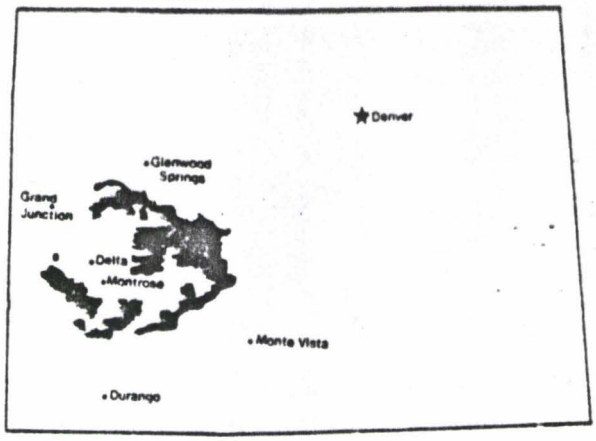
The various vegetation types provide habitat for a varity of game and nongame wildlife species. The more common species include mule deer, elk, black bear, blue grouse and ptarmigan, Gambel's quail, snowshoe hare, and cottontail rabbit. Bighorn sheep inhabit several areas of the Forest. Favorable habitat for bald eagle and peregrine falcon exists in the Forest. Fisheries include rainbow, brook, and brown trout, cutthroat and kokanee salmon, mackinaw, northern pike, and white sucker fish (USDA Forest Service, 1983).

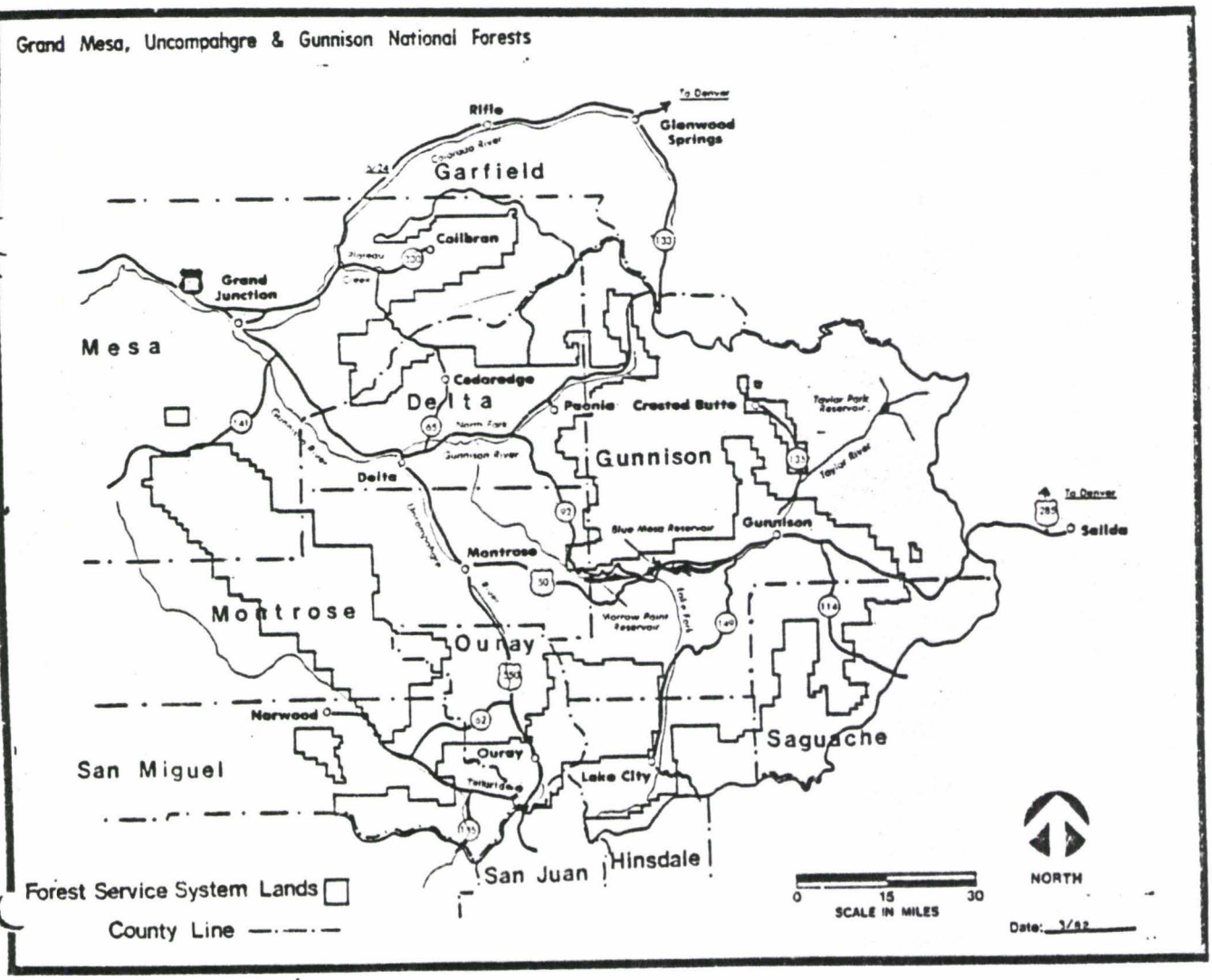
FIGURE

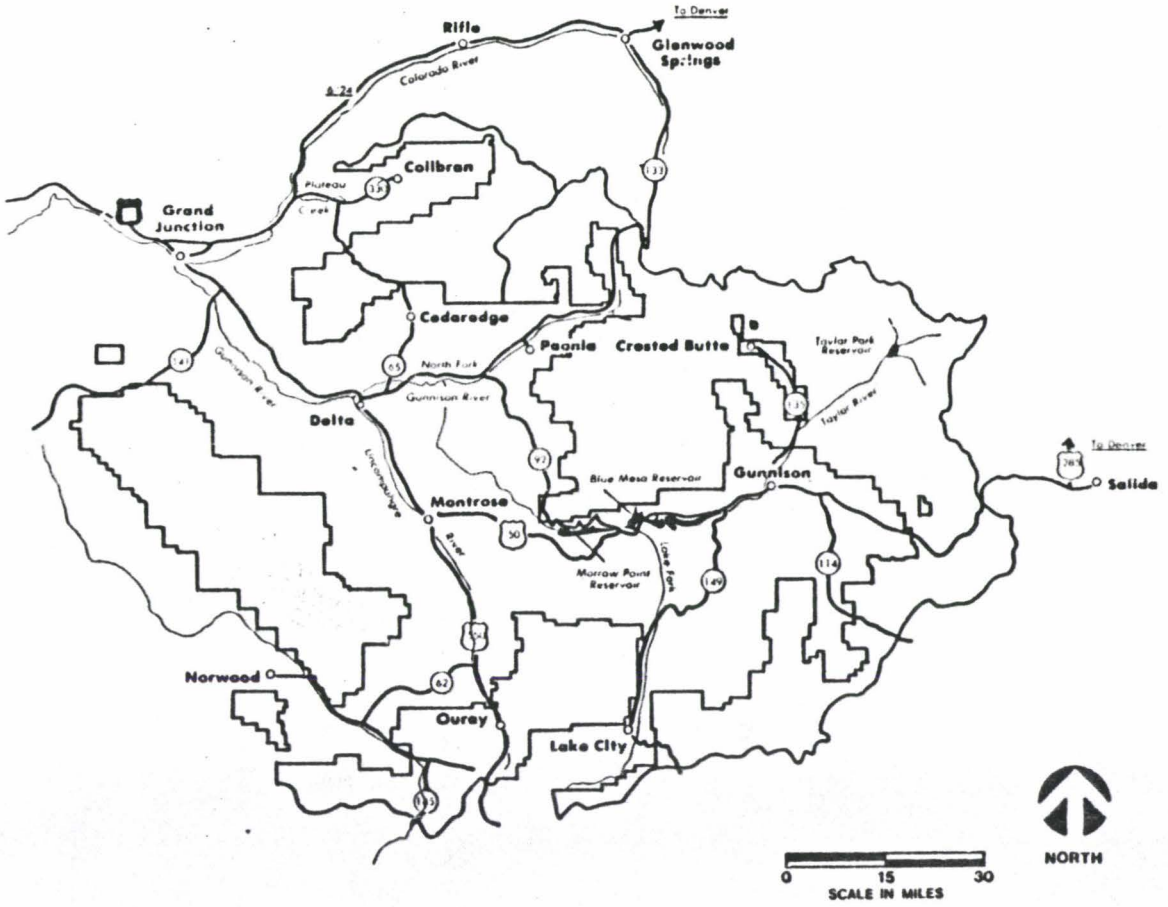
VICINITY MAP
Grand Mesa, Uncompahgre, and Gunnison National Forest

Region 2, Forest Service,
United States Department of Agriculture

The State of Colorado







Planning Area Grand Mesa, Uncompahgre & Gunnison National Forests

Forest Land and Resource Management Plan

By: N.R.

Date: 8/81

CHAPTER 3

TRENDS AND FORECASTS

CHAPTER 3

TRENDS & FORECASTS

The following chapter on trends and forecasts will briefly look at 1) Social 2) Environment, 3) Economic, and 4) Recreation factors of 1986; and then analyze how their relationships might affect the recreation resources on this Forest. It is the intent of this report to provide a brief overview, prompting ideas and thoughts about the future of recreation on this Forest

The author chose to analyze the above-mentioned topics because of their close-knit relationship to the Forest's recreation resources.

SOCIAL

It is predicted that in the remaining years of this century, world population will top six billion; by 2025, eight billion. The trend in people migration in third world countries, during the century, has been for people moving from rural areas to the cities (Fox, 1984).

The upsurge in Third World urban populations has overwhelmed natural resources. Sprawling slums, massive traffic jams, chronic unemployment, regular failure of electric and water services, strained educational and recreational facilities, and skyrocketing food and fuel costs are the stuff of daily existence (Fox, 1984).

A growing global awareness of these above-mentioned problems has been increasing due to advances in the communications field and increases in Third World educations levels.

ENVIRONMENT

A downward trend is projected for the overall world environmental condition as additional pressures are put on natural resources. Some recent world ecologic problems are listed below.

-- Acid rain problems recently appearing in industrialized Europe, Brazil, China, and South Africa (Science Digest, 1984).

-- Poisoning of the Lapp reindeer herds in northern Norway after nuclear power plant mishap in Kiev, Russia, which is approximately 1,400 miles away.

-- Starvation of people in Ethopia due to population base exceeding the carrying capacity of the land.

-- Desertification and loss of top soil in many Third World countries due to neglect of environmental carrying capacities.

-- Thick soot cloud forming over the Artic and Antarctic polar caps which could possibly lead to a partial deterioration of the Earth's ozone layer (Rocky Mountain News, 1986).

-- Diseases and poisonings showing up in certain types of migratory wildlife due to very lax environmental controls in bordering countries.

-- Deforestation of the Amazon Basin rain forests, affecting carbon dioxide levels, soil erosion, and the tremendous genetic bank of plants and animals.

ECONOMICS

In the future, the world is predicted to become a smaller place "economically" speaking. Caused by the increase in world trading and selling of merchandise. Also, with the better sharing and distribution of natural resources (raw material) the USA, Japan, and West Germany may not be the economic super powers that they were in the 1980's (Heilbroner, 1987).

This new global economy will have far reaching impacts into many people's lives in even the smallest of countries.

RECREATION

Recreation enthusiasts from the USA are seeking recreation opportunities and experiences all over the globe, from mountaineering in Antarctica to motor driving tours in Tibet.

Western recreational values (easy access, seeing plus preserving wildlife, and preserving ecosystems in "natural" states) are being imposed on and influencing the lives of indigenous peoples in places like Nepal, India, Kenya, and so on.

SUMMARY

Many of today's environmental problems are global in scope and make national, regional, local, or even Forest solutions difficult. These problems include human population growth that is exceeding the capacity of some countries to feed and sustain their burgeoning numbers; toxic chemicals, developed with the intent of benefiting humankind, that turn out to be serious threats to health with side effects that kill and maim; and the greatly increased burning of fossil fuels, producing atmospheric effects that could melt icecaps and flood coastal cities (Cahn, 1985).

All these escalating environmental problems point toward a growing global concern over world environmental problems. We are now living in a day and age when environmental mishaps are no longer just the problem of individual countries. They are now everybody's problem.

Debates over pollution of the Earth's environment has spawned volumes as scholars, scientists, and ordinary people look to the future with varying degrees of optimism and gloom. In a lecture titled "The Terror of Change", Patricia Gulas Strauch cited three aspects of our future about which there is little disagreement: the speed of change will accelerate, the world will be increasingly complex, and nations and world issues will be increasingly interdependent (Fox, 1984).

TRENDS in the UNITED STATES

SOCIAL

Today there are over 230 million people in the United States. Though fertility rates - the number of births that women have, on the average, in their lifetimes - are not high compared to historical rates, we are growing by over two million people each year. Immigration and larger number of women having babies are responsible (Webb, Jacobsen, 1982). In addition, the average person in the USA has a longer life span today as compared to fifty years ago in this country.

The Bureau of Census projects that the U.S. population will grow from its present 230 million to 260 million by the year 2000. If the fertility rates and immigration levels of 1981 continue, the U.S. population will reach 300 million in 2030. To reach a smaller population in 2030 requires lowering immigration quotas or lower fertility, or both (Webb, Jacobsen, 1982).

Currently the U.S. population is disproportionately distributed throughout the country. Approximately 143 million people, or 60% of the total population, live on less than one-third of the U.S. land base. The majority of Americans are crowded along the coastlines. There is no immediate change predicted in this situation.

ENVIRONMENT

The current trend is for more and more people migrating to the surburbs and cities to find jobs and money. Leisure time and affluence are still on the rise for the average American citizen. Leisure time is expected to move in the direction of a shorter work week, more holidays, and time off for other reasons. Greater numbers of people will place a higher premium on time invested in leisure than ever before (McLellan, 1986).

The average American citizen seems to be more concerned over environmental issues than he or she was thirty years ago. Environmentalism continues to have a prominent voice in the national political arena as well, despite fluctuations occurring with different administrations.

The United States has it's fair share of environmental problems as compared with other industrialized nations throughout the world. Some, such as water use in the West are regional. Others like hazardous and high level nuclear waste disposal are national concerns.

Environmental subjects and issues are increasingly appearing on TV, in the newspapers, books, magazines, and in the conversations of the average public citizen. Within the past few years, environmental groups such as the Sierra Club, National Resources Defense Council, and the Environmental Defense Fund have become more prevalent and carry more political clout. This greater exposure and dialogue points toward a growing concern of American citizens about environmental issues.

ECONOMICS

Some of the United States businesses are having difficulty adjusting to a global economy concerning food, timber, and other merchandise. Today's global economy has far-reaching impacts, which directly affect the management of the U.S. National Forests' resources.

Expenditures for recreation have climbed steadily at the Federal, State, and local levels in the past 20 years. While the population of the United States grew 25 percent between 1962 and 1982, total parks and recreation expenditures by local governments during this same period grew 644 percent. The next twenty years will evidence a leveling of these expenditures. The Land and Water Conservation Fund has been cut by over 50 percent at the local level since 1978, and this decline will probably continue. Declines in other federal assistance programs will also severely impact local operations (McLellan, 1986).

State and local institutions will continue to increase promotion and development of travel and tourism as a means of economic development (McLellan, 1986).

RECREATION

Recreation demand in this country will be fueled by population factors, per capita real income, amount of leisure, and availability and cost of travel (McLellan, 1986).

Look for a generally expanding role for outdoor recreation in American life. Expansion will be uneven in activity development, and participation increases will not be as sharp as those of the 1960's and 70's but will be persistent (McLellan, 1986).

SUMMARY

The average U.S. citizen is becoming much more cognizant of and knowledgeable about national and global environmental problems and issues.

SOCIAL

Colorado has recorded a growing population over the past century. Projections are for continued population growth within the state (Colorado State Census, 1986). This growth has appeared mainly in the urban areas of the state, and is attributed to births within the state as well as immigration to the state.

In 1860, Colorado was a sparsely settled territory of 25,000 hardy pioneers. Scarcely a century later in 1960, there were approximately 2,000,000 people living within the state (Colorado State Census, 1986). Eighty percent of Colorado's three million people dwell in the urban string bean - in Denver and its satellites, in Boulder, Fort Collins, Greeley, and Colorado Springs (Edwards, 1984).

ENVIRONMENT

As each passing year goes by, there seems to be more and more stress and strain put on the State's environment. Witness the increases in environmentally sensitive issues arising in the State's court systems. Some current controversial issues concerning the State's environmental quality are listed below:

-- Controversies over logging practices in the State's national forests

-- Controversies over proposed large-scale mining developments and their impacts to the environment.

-- Controversies involving water shortages in the state. For example, the depletion of the Ogalala aquifer in eastern Colorado. And disputes over construction of large-scale reservoirs, on the western slope of Colorado, for the purpose of diverting water to the Front Range urban areas.

-- Disputes over building new ski areas in the state. Plus recent conflicts concerning ski area expansions versus wildlife concerns have begun to emerge.

-- Displacement of wildlife onto private lands causing property and crop damage.

-- Debates over disposal of radioactive and hazardous wastes within the States borders.

ECONOMICS

Job rates are down for the State. Employment is hard to find especially in the rural areas. What few jobs can be found are located in the front range cities (Colorado Labor Force Review, 1986).

Colorado has traditionally been a "boom-bust" state economically speaking. This trend (of shale, recreation, and water) will continue regardless of what's going on around it.

These above mentioned concerns are being dealt with by Governor Roy Romer's effort to diversify Colorado's economy away from agriculture, natural resources, and tourism.

RECREATION

Tourism is taking over mining and farming as the State's leading economic factor. Part of this boom in the tourism business is due to increases in both local and out-of-state people vacationing in Colorado. Most of these out-of-state tourists originate from either California, Illinois, or Texas (Colorado Tourism Board, 1984).

Despite the above mentioned trends, Colorado citizens are finding additional leisure time on their hands. Some of this leisure time is being expended by more and more people recreating on Forest land (USDA Forest Service, 1983).

SUMMARY

Coloradoans have have shown an increasing concern over environmental issues as exhibited by the amount of environmentally sensitive issues which reach the news media. They have also demonstrated a love for recreating on the State's public lands, as shown by increases in the number of people recreating on them (Colorado Tourism Board, 1984).

There is a growing awareness among the State's citizens that the quality of life must not be sacrificed for economic growth in the region (Edwards, 1984).

WEST CENTRAL COLORADO TRENDS

SOCIAL

The 1970 census covering this area showed a population of 118,780 people. The 1980 census showed a population total of 170,603 people for this same area (Colorado State Census, 1986). Thus, even this remote and out-of-the-way region of Colorado shows an increase in human population levels in concomitance with the rest of the world.

When compared to the average population density of people east of the Mississippi River, west central Colorado's population level is extremely sparse. As of 1980, the average population density per square mile of land for the 26 states east of the Mississippi River is 260 people per square mile. The density of population per square mile in Colorado is 27 people per square mile of land (World Almanac, 1986). The density of population per square mile in west central Colorado is 6 people per square mile of land (USDA Forest Service, 1983).

ENVIRONMENT

West central Colorado is known for its wide open spaces and clean air. As yet, it does not have an air pollution problem as do many of the front range cities. In brief, west central Colorado does not have the overall environmental pollution problems to the extent that many of the front range cities have. However, there is a growing concern by the local populous over the quality of their natural environment.

ECONOMICS

West central Colorado has been a "promised land" for business speculation for all manner of entrepreneurs - uranium, coal, oil shale, fruit, beef, water, and tourism. Millions of dollars have poured into the area from one source or another, raising hopes and populations, only to crash back down into depression and frustration. Vacant airports, houses, mine shafts, shopping plazas, public works, and other manifestations stand with the gypsy element of the population.

RECREATION

The area's local people take great pride in their "Western Slope" of Colorado heritage. The area remains as one of the last footholds of a "western cowboy" type life style in the state. The area's people have retained this "western" culture and image and take pride in being separate and apart from the urbanized front range life style. The local people also identify with and take pride in the west slope's "frontier" image; and for the most part, there is a desire by the local peoples to preserve and protect the west slope "frontier" character of their environment.

The Tourism industry is big business in west central Colorado. Essentially, west central Colorado's economy is run by the recreation industry. Witness the huge condominium developments associated with the ski resorts of western Colorado.

SUMMARY

The west central area of Colorado is becoming more and more dependent on its recreation resources for its economic survival (Ulrich, J).

What has remained solid for west central Colorado is the attraction of the land and its wildlife, its scenery, and its escape from where the visitors have always come. This part of west central Colorado seems to be a permanent attraction, and is maybe the attraction and the area on which the Forest should focus.

CHAPTER 4

The following chapter on "FOREST TRENDS" will provide a cursory overview of the current situation and trends affecting the recreation resources on this Forest. It will also attempt to compare the effects of some recreation activities on the timber, range, wildlife, and wilderness resources of the Forest.

CHAPTER 4

FOREST TRENDS

CHAPTER 4

FOREST TRENDS

RECREATION & RECREATION

Current Situation - 1980's

Recreation in the 1980's is a major use on this Forest as the following figures confirm. An estimated 2.5 million recreation visitor days (RVD's) were recorded in 1980. These total RVD's were broken down in the following ways (USDA Forest Service, 1983):

-- Use in 1980 of National Forest System developed recreation sites was approximately 578,000 RVD's annually.

-- The three downhill ski areas on the Forest supported 222,000 RVD's during the 1980 season.

-- Dispersed recreation use on the Forest was 1,234,700 RVD's for 1980.

-- Wilderness use on the Forest in 1980 was approximately 170,000 RVD's.

The following six pages of graphs and charts will break down the above mentioned recreation uses in finer detail.

Approximately 50 percent, or 1.2 million, of the total RVD's for the Forest, were in dispersed recreation, and took place in undeveloped areas (USDA Forest Service, 1983).

Among the more notable recreation pursuits on the Forest are downhill and cross-country skiing, hiking, backpacking, big-game hunting, horseback riding and packing, fishing, and motorized touring (USDA Forest Service, 1983).

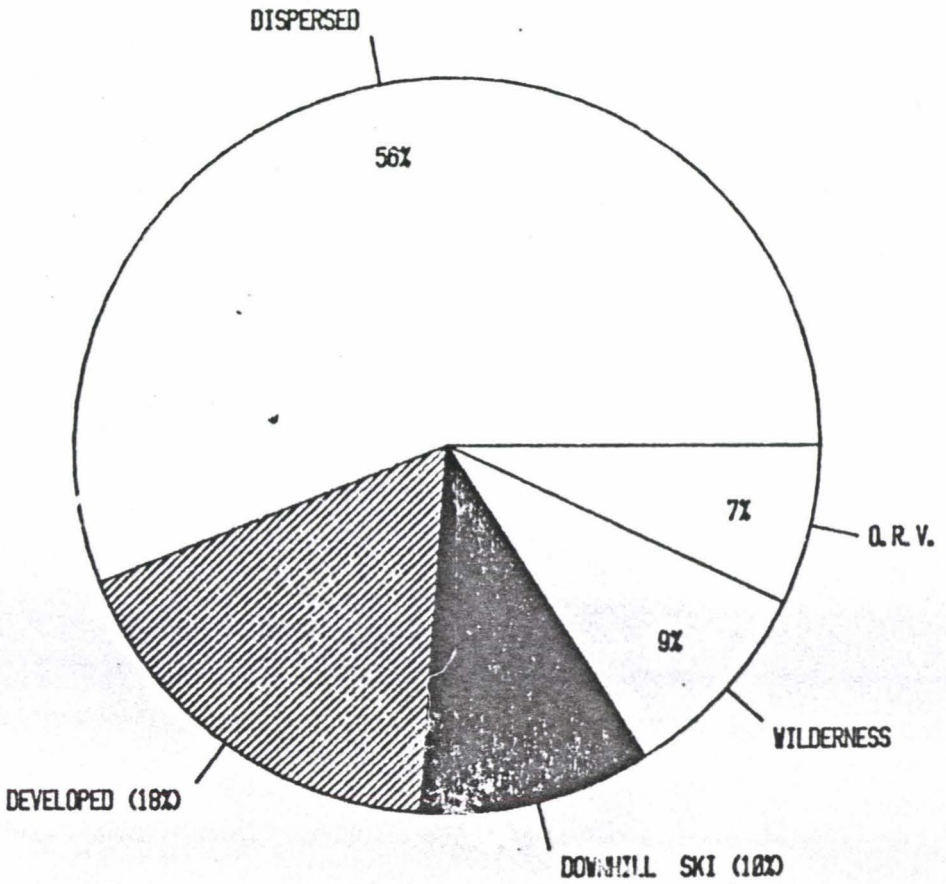
As is revealed by the above-mentioned figures, the recreation industry is big business on the Forest. Many of the local towns and communities depend on the Forest's recreational resources and attractions for their existence. The visitors they draw make substantial contributions to the economy of west central Colorado. For example, thousands of dollars are spent each year by skiing vacationers at the Forest's three major ski areas - Crested Butte, Telluride, and Powderhorn (Colorado Tourism Board, 1984).

Also, recreation opportunities on the Forest are of international interest. There are many people from foreign countries who visit and engage in recreational activities on this Forest. This international clientele is mostly observed at downhill ski areas and wilderness areas on the Forest.

The dude ranch and outfitter-guide industries have existed since the beginning of this century on this Forest. There is more demand for these types of activities than the Forest can permit. These operations are being joined by ski resorts, white-water rafters, and other mountain recreation service and equipment businesses that cater to the ever-growing tourist trade.

RECREATION USE by GENERAL CATAGORY

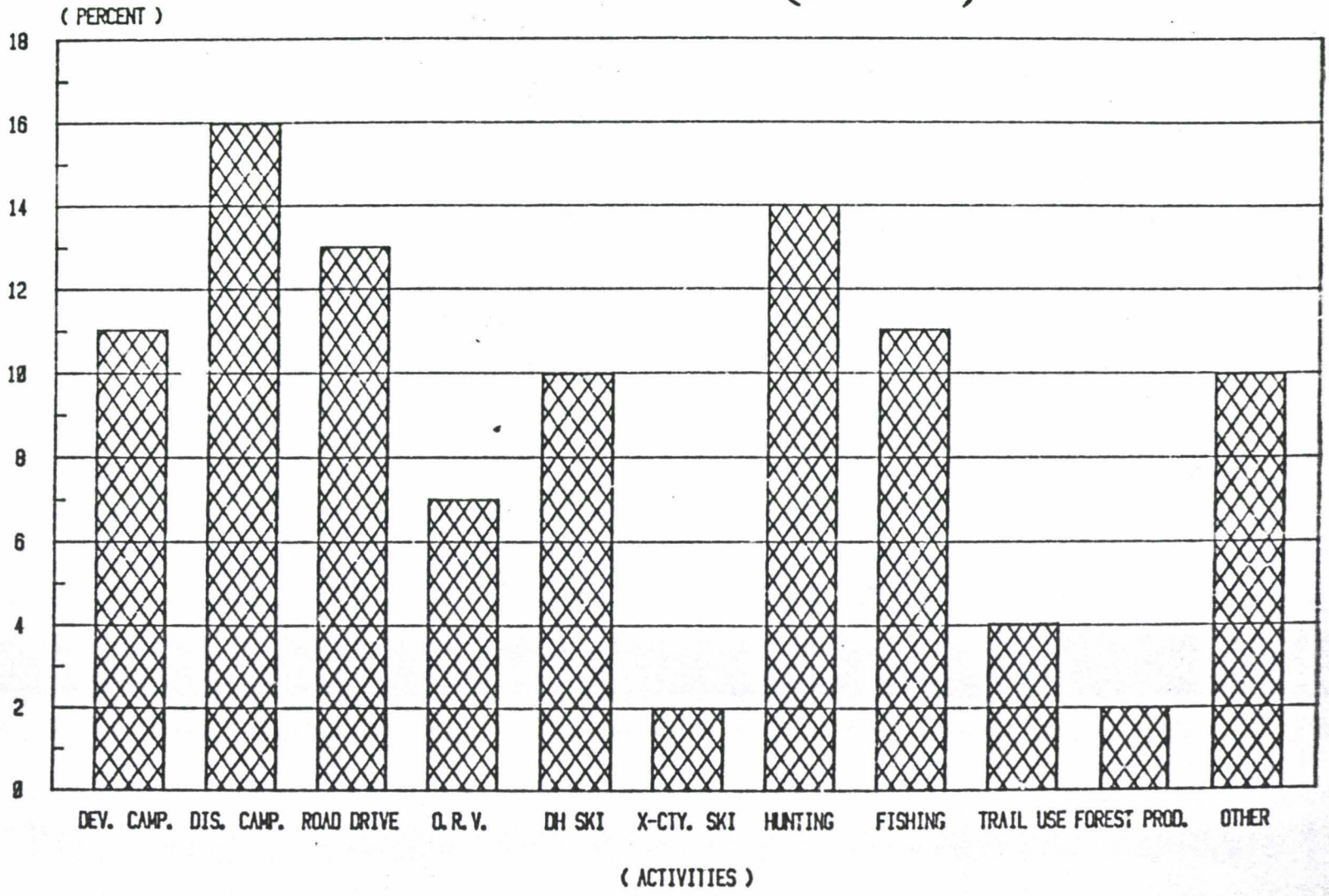
FIGURE 3 (1983 DATA)



(ACTIVITIES BY APPROXIMATE PERCENT OF TOTAL USE)

PRINCIPAL RECREATION ACTIVITIES

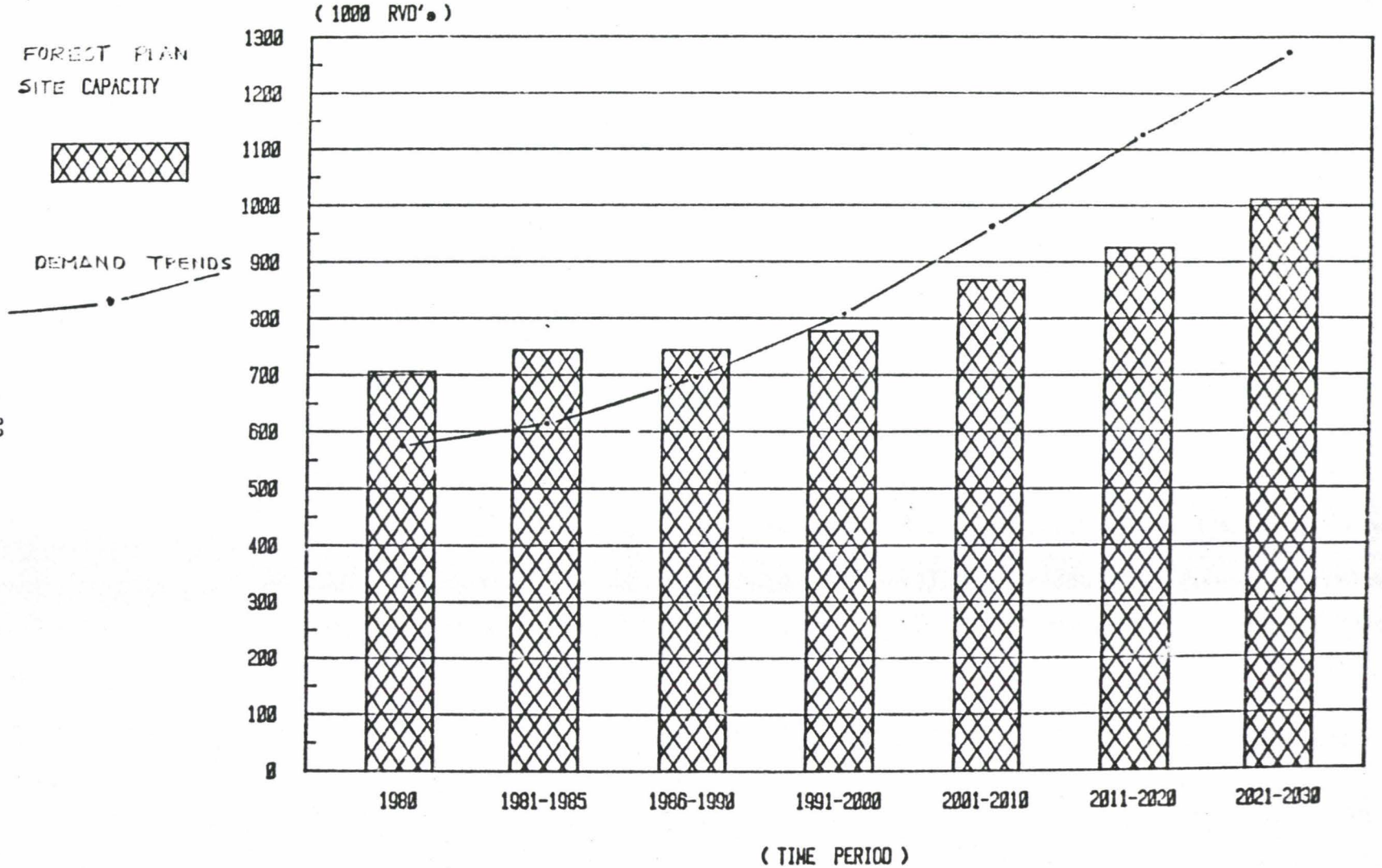
FIGURE 2 (1983 DATA)



FOREST & PRIVATE FACILITIES

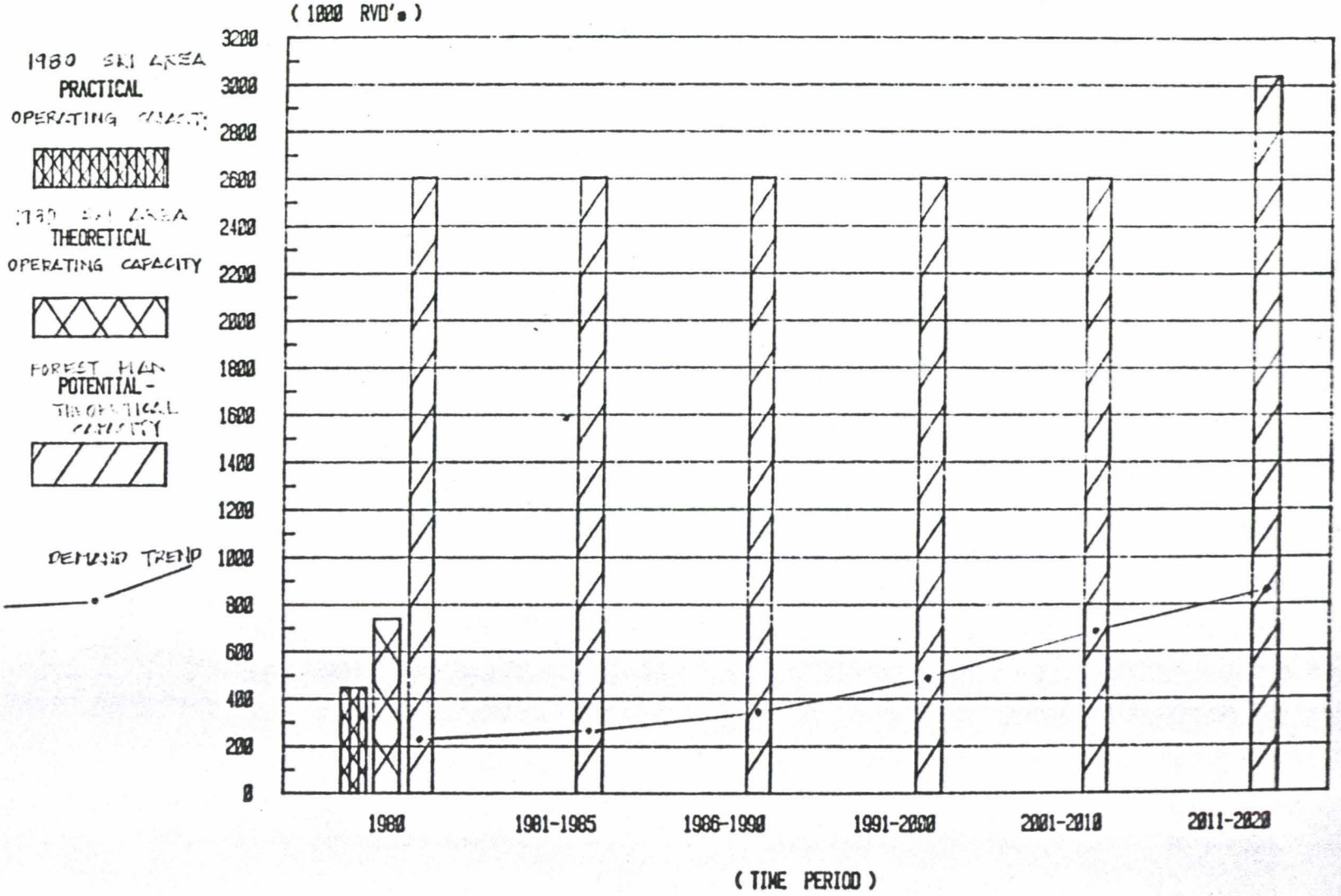
DEVELOPED RECREATION SITES

FIGURE 6



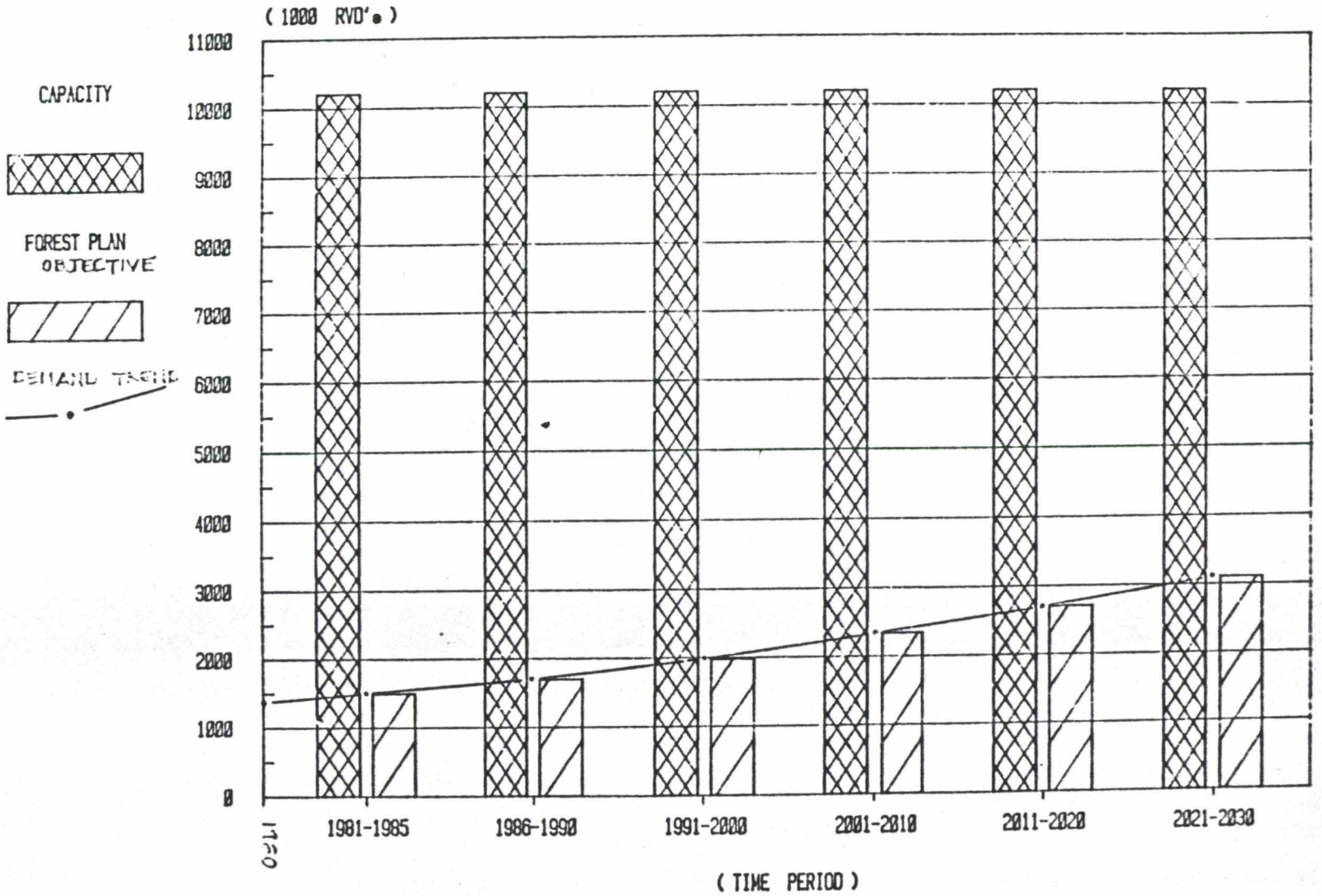
DOWNHILL SKIING

FIGURE 7



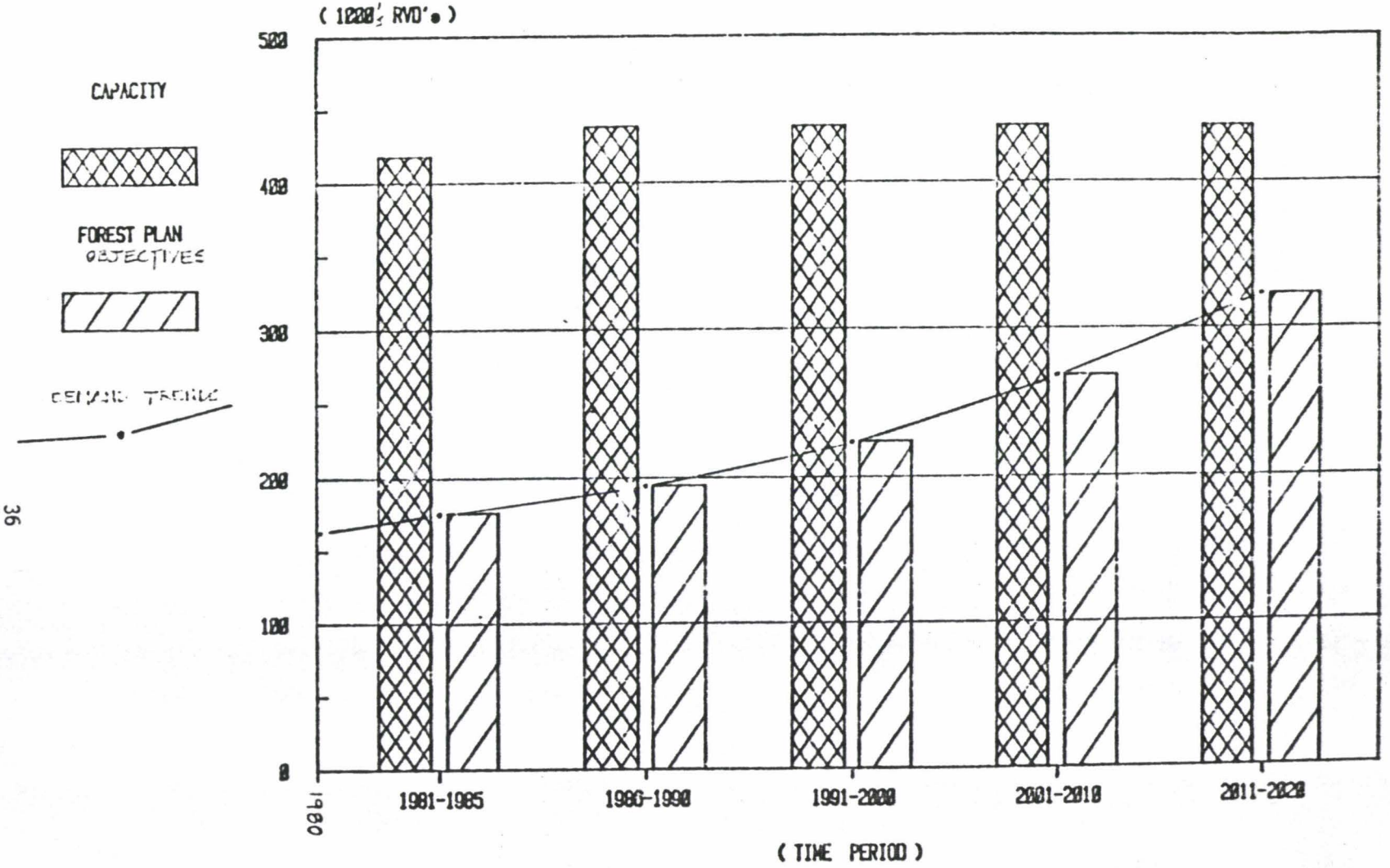
DISPERSED RECREATION

FIGURE 5 (INCLUDES OTHERS)



WILDERNESS

FIGURE 9



Forest Trends - 1980's

An increase in use of the dispersed recreation resources, and a leveling off in some of the developed recreation uses has been taking place. Dispersed recreation is starting to receive more attention in the Forest's recreation shop.

Factors such as population growth, leisure time, and energy costs will affect dispersed recreation use. Dispersed recreation demand will continue to increase faster than developed recreation. As travel expenses increase, the amount of dispersed recreation on the Forest by local residents will increase (USDA Forest Service, 1983).

Downhill ski area use is starting to level off as compared to the real growth eras of the 60's and early 70's. The era of the 60's and 70's saw the development of new ski areas throughout the state. The three major ski areas on this Forest (Crested Butte, Telluride, and Powderhorn) all got their start during this time period. By the 1980's most of these new developments had stopped, for a variety of economic reasons, and expansions of existing ski areas had become vogue.

The "right-to-risk" activities have begun showing up increasingly on the Forest. Witness the increase in ice climbing, technical rock climbing, hang gliding, and out-of-bounds skiing activities which began popping up in the 1970's and 80's (USDI Park Service, 1985).

The trend in the 1980's was for more and more private clubs, volunteer associations, and other miscellaneous organizations to take over the maintenance and even construction of recreation facilities and trails on the Forest. The Forest has started accomplishing more of their recreation goals and targets by using this volunteer labor force.

Energy conservation efforts on the part of the public are changing the patterns of recreation use on the Forest. These changes are making development opportunities near population centers more attractive to all landowners. Commercial resort facilities are turning toward year-round programs offering a variety of recreation activities. There is growing interest in activities that do not use fuel (USDA Forest Service, 1983).

Current Situation - 1980's

The Forest currently has 1,295,775 acres classified as "suitable and available" rangeland. These areas support about 320,000 animal unit months (AUM's) annually. There are 238 livestock grazing allotments on the Forest; 173 are cattle and horse allotments, 61 are sheep and goat allotments, and 4 are dual use. Within classified wilderness areas, 23,000 AUM's are permitted on approximately 115,000 acres of suitable range (USDA Forest Service, 1983).

Livestock grazing on National Forest System land is a vital part of the year-round operation of many local cattle and/or sheep ranches.

While the amount of cattle grazed on National Forest System lands on the West Slope region of Colorado is extremely small in terms of the national total, livestock grazing is economically important to many rural areas within the region. Most of the stockmen reside in or near communities dependent on agriculture and livestock production (USDA Forest Service, 1983). The livestock industry perpetuates a part of the western heritage that is highly valued by the peoples making up the local community.

Forest Trends - 1980's

Range use estimates for AUM's on the Forest shows a projected leveling off period for the next two decades (Ulrich, 1987). These leveling off predictions are partly attributable to the dire straits the cattle industry is currently in on the western slope of Colorado. Just on this Forest alone, there have been approximately twenty-five head of cattle and/or sheep permittees who have gone out of business within the past three years from the time of the writing of this report.

Currently, Americans eat much more red meat per capita when compared to any other country in the world. However, Americans seem to be changing their palates to eating more fish and chicken as well as vegetarian dishes (Ehrlich, 1974).

The adverse effects of livestock grazing on public lands has been receiving more attention in the news media in recent years. There have been many heated debates over the raising of Grazing Fee Permits on this Forest alone. The political clout of the cattle industry in the state of Colorado does not seem to hold the power that it did in the past.

Current Situation - 1980's

In the 1980's, timber harvest activities were conducted on land identified as "capable", "available", and "tentatively suitable". Approximately 37% of the Forest, 1,089,208 acres were classified suitable for timber production in 1983 (USDA Forest Service, 1983).

Commercial timbering activities have been an historic use on the Forest since the 1890's. They have also been an important facet to the livelihood of several small locally run businesses located near the Forest. However, very little of the area's total economy depends on the timber coming off National Forest land (USDA Forest Service, 1983). More recently, timbering has become a subject of public controversy. Concerns over environmental impacts are raised frequently.

Timber management on the Forest has not been a cost-efficient program in recent years if only considering the direct costs and revenues of selling trees. However, when all the other associated resource benefits are considered, a timber management program becomes a realistic and cost-effective management tool (USDA Forest Service, 1983). Through planning and plan implementation, combinations of resource goals can be achieved by timber harvesting. For example, proper harvesting methods can favor the regeneration of trees for wood products, result in increased water yields, provide wildlife habitat improvement, and provide variety in visual aesthetics (USDA Forest Service, 1983).

Fuelwood cutting of small trees, noncommercial species, dead timber, or logging slash, is also an important use of the Forest. This action is considered a recreational activity by many people even though its direction comes from the Forest's timber shop. Demand for free-use firewood is estimated at 9 million board feet per year and rising.

Forest Trends - 1980's

Below cost timber sales are still being set up.

State and private lands have begun to take more of a major role in meeting demands for wood products in the area (USDA Forest Service, 1983).

In the 1980's there has been a leveling-off trend concerning timber demand on this Forest (Ulrich, 1987). This could be partially due to the overall poor lumber quality and slow growth of the trees on this Forest when compared to trees in the Pacific Northwest and the southeastern sections of this Country. It may also be due to recent declines in the new housing construction markets and to local opposition to timbering on the Forest.

RECREATION & WILDLIFE

Current Situation - 1980's

The Forest's varied habitat supports 314 species of wildlife and fish. Of these, 96 species are hunted, fished, or trapped. In 1980, hunting generated 105,200 RVD's and fishing generated 243,200 RVD's on this Forest (USDA Forest Service, 1983). In 1981, hunters and fishermen spent over 1.04 billion dollars in Colorado (Fogg, 1987).

Mule deer and elk are the most widespread big-game species occurring throughout the Forest. Deer and elk hunting on the Forest results in substantial contributions to the State and local economies (USDA Forest Service, 1983). Historically, big game hunting and sport fishing have significantly contributed to the local economies of the adjacent towns and communities.

The State Division of Wildlife puts much energy, effort, and money into managing the deer and elk populations occurring on the Forest. Hunting and fishing are "big business". In 1981, hunting and fishing revenues to the State exceeded those of agriculture, making these pursuits the number two revenue generator to the State's economy (Fogg, 1987).

As of 1986, the Forest has identified several threatened or endangered animal species that may inhabit or make seasonal use of the Forest. One threatened or endangered plant species has been identified as occuring on the Forest (USDA Forest Service).

Forest Trends - 1980's

The 1950's, 60's, and 70's, saw definite increases in big game hunting activities on the Forest. However, the 1980's began to see a slight trend indicating a leveling off and even a decrease in hunting activities on the Forest (Shuster, Marquardt, 1987).

There have been slight increases in the nonconsumptive uses of wildlife species recorded on the Forest during the 1980's. Activities such as wildlife photography, bird watching, and nature study have been increasing (USDA FOREST SERVICE, 1983).

During the 1950's, 60's, and 70's wildlife concerns of the public seemed to primarily revolve around deer and elk. These animals were highly visible hunting objects, and in many ways symbols of the wild. With the importance of a balanced environment, the public in the 1980's seems to be concerned and aware of other wildlife species beyond just deer and elk.

Wildlife habitats on private lands are being substantially altered and even eliminated by urbanization and conversion of land to more intensive uses, thus increasing habitat demands on National Forest System land (USDA Forest Service, 1983).

RECREATION & WILDERNESS

Current Situation - 1980's

The Forest administers all or portions of eight designated wilderness areas. There are currently 501,777 acres of wilderness on the Forest. This amounts to approximately 17% of the Forest (USDA Forest Service, 1983).

There were approximately 185,000 RVD's in wilderness areas on the Forest in 1986. Annual use of existing wilderness is estimated at 0.5 visitor days per acre. Based on the Rocky Mountain Region's experience with a wide variety of use levels, and assuming intensive management and reasonable controls, wilderness areas can accommodate an average of approximately 1 visitor day per acre annually without impairment of wilderness character. This indicates a potential user capacity of about 418,000 visitor days for wilderness on this Forest, which is approximately twice the present level of use. However, present visitor use of wilderness areas is not uniform on this Forest. Some of the more popular areas are overcrowded with people and are in danger of losing their wilderness character (USDA Forest Service, 1983).

There are currently two areas eligible for wilderness suitability analysis on the Forest. These are the Fossil Ridge Wilderness Study Area and The Cannibal Plateau Further Planning Area.

Forest Trend - 1980's

Future wilderness use can be expected to rise during the next decade at nearly the historic rate of increase which is at 15% per ten year increments. Changes in this rate beyond the next few years will depend on factors such as travel costs and leisure time and Forest management policy (USDA Forest Service, 1983).

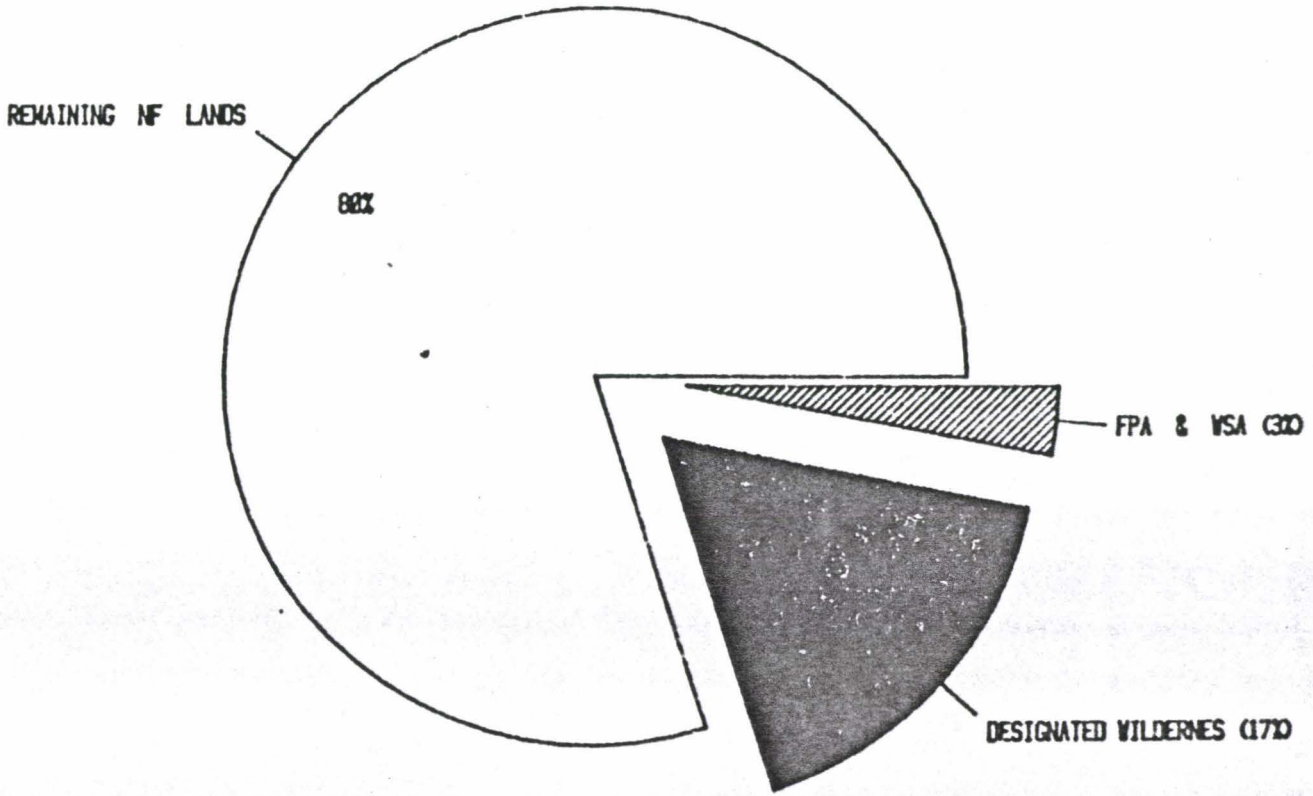
The proposed wilderness demand on this Forest in the year 2030 is projected at 386,000 RVD's per year (USDA Forest Service, 1983).

Other activities permitted under the current Wilderness Act, such as prospecting, mining and building transmission corridors and water-use structures, are projected to increase and will create pressure on existing wilderness areas. Valid mining claims and leases established prior to 1984 are permitted to operate in wilderness areas. Proposals and applications to operate these mining claims have been increasing and can be expected to continue to increase as the Nation faces depletion of minerals and nonrenewable energy resources (USDA Forest Service, 1983).

In the 1980's, there were no "major" plans for the creation of new wilderness areas or expansions to existing wilderness areas on the Forest. However, during this time period there were two wilderness bills for this Forest being negotiated and considered in Congress.

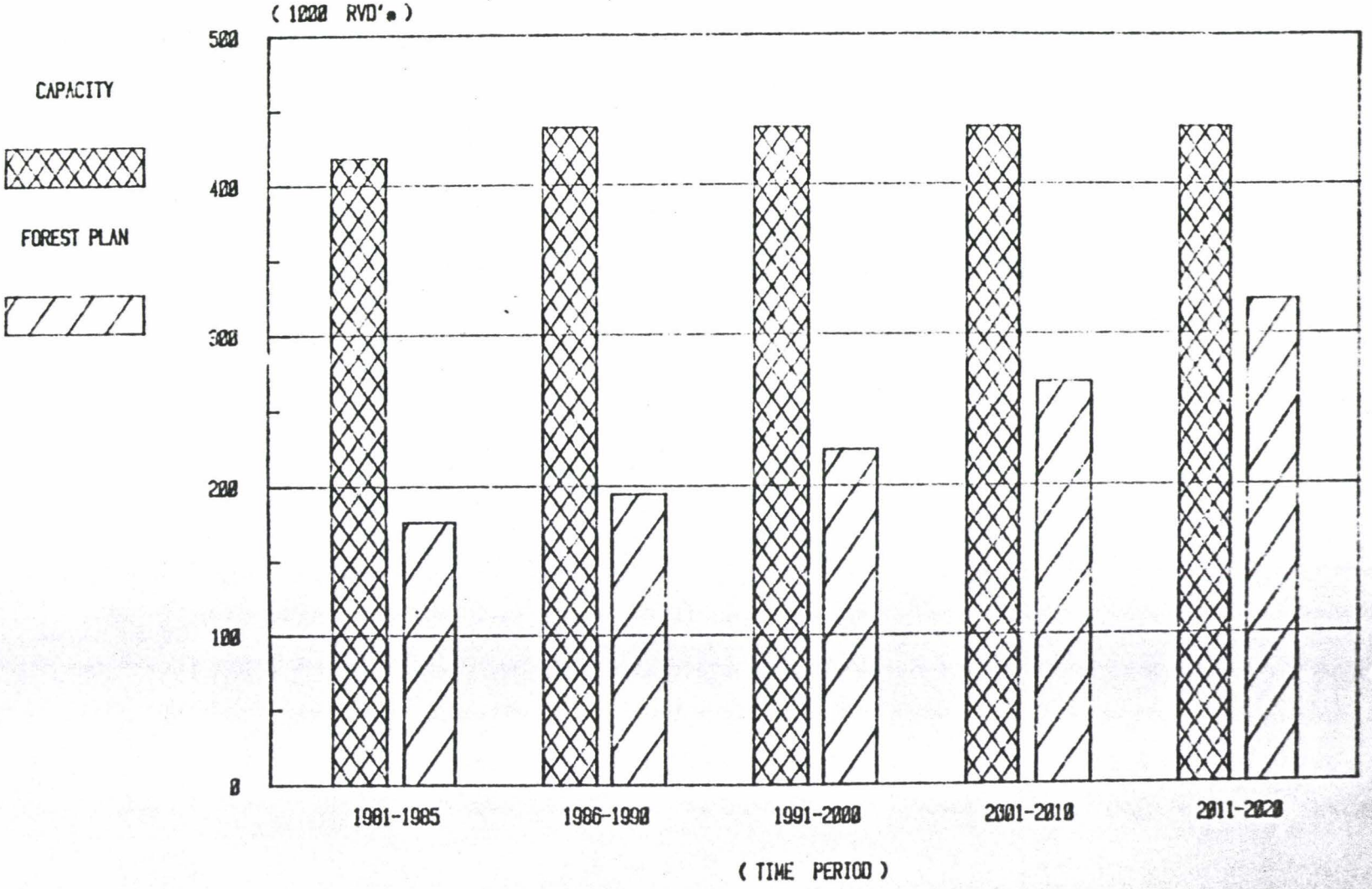
DESIGNATED WILDERNESS & PROPOSED AREAS

(1983 DATA)



WILDERNESS

FIGURE 9



CHAPTER 5

FUTURE - 2030

CHAPTER 5

FUTURE: 2030

(POLITICAL ASSUMPTIONS)

This chapter is the culmination of analysis of the preceding chapters. It suggests a hypothetical situation concerning the recreation resources on this Forest in the year 2030.

When dealing with the future, certain assumptions must be made. The following chapter will make several assumptions about the future in order to portray some imaginative and hopefully thought-provoking concepts for the year 2030.

The projected year of 2030 is nearly fifty years down the road or approximately three generations away from the present. And, to put it mildly, at the rate our society and economy changes, a lot can happen in fifty years. Whatever judgment one may pass on any particular analysis or projection in this report, it is clear that the vagaries of these and future times may produce all sorts of startling directions.

Some of the following ideas and concepts portrayed in this chapter may seem a bit strange, bizarre, and remote - but please keep in mind that nothing in this world is completely impossible. New and innovative ideas and thoughts can help break the rust that builds in our minds and excite them to consider other ways.

As an example of the above-mentioned philosophy, the following parable is offered. If a U.S. Forest Service ranger from Colorado had been approached in the year 1918 and told that within 50 years there would be a multi-billion dollar industry starting up in the Colorado mountains which revolves around people sliding down snow-covered mountain sides in mid-winter on skinny little fiberglass boards, I'm sure he would have thought this concept totally absurd, ludicrous, and unrealistic. This parable goes along to establish the point that no ideas or concepts about the future can be completely discounted, no matter how hazy or intangible they might seem at the present.

This chapter will look at the same resource relationships of timber, range, wildlife, and wilderness, to the recreation field as did the previous chapter, but projected into the year 2030.

Looking into the future is often a little like charting unexplored territory: It creates great exhiliration and immense uncertainty. The historic currents of our time and the directions in which they are taking America certainly call for something like an explorer's strength, understanding, and boundless optimism (Long, 1987).

Before we get into the recreational prospects on the Forest in the year 2030, the author will set the stage for this chapter by making some assumptions about laws, government, economics, and society of the future.

International

-- Establishment of a World Conservation Association. This is a branch of the United Nations organization, except that its main function is to analyze and solve world ecologic problems and catastrophies.

Federal (USFS)

-- Several revisions pertaining to NEPA and NFMA have passed through Congress. For example, the most important revision which occurred concerned the Interchange programs. The old separate federal organizations of the USFS, BLM, and USFW are now managed under one roof. The new all-encompassing agency is called the "Department of Natural Resources".

-- USFS "user fee" legislation has passed through the legislative processes. This simply states that anyone using the Forest or recreating on the Forest must have in their possession, at all times, a "user fee card". These user fee cards can be purchased for a nominal fee at most Forest Supervisor Offices or District Offices throughout the country.

-- The US Forests are now operated under a Total Ecosystem Management philosophy or (TEM). Very simply, this management philosophy takes into account environmental concerns and wants much more than the old management system did. Under this new system, "Nature" dictates how the Forest is managed much more so than economic gain and/or financial factors under the old system.

-- The biggest change from a national political standpoint concerns the election of President. Partisan politics is a thing of the past. Politicians and lawyers no longer run the country. People with non-political backgrounds can now attain the rank of presidency in this country. People with science, teaching, and natural resource backgrounds have held terms in the presidential office!

-- Federal tax laws had been revised to discourage incentives for having overly large families and several revisions to immigration laws had been made, all in an effort to get a better hold on human population growth and its associated negative by-products.

-- New and stricter air quality and acid rain laws had been put into effect by Federal and State governments.

-- The Forest Service "Smokey the Bear" symbol has been resurrected as a symbol of healthy forest environments, not just stomping out fires.

STATE GOVERNMENT

State programs and policies are set up to conserve biological diversity and maintain or restore natural plant and animal habitats.

State and Federal laws have been passed to encourage the re-establishment of threatened and endangered plant and animal species within their native habitats.

The State has a stronger agricultural policy through legislation creating disincentives for conversion of productive land to urban uses. "Ranching for Wildlife" programs are commonplace. The State works closely with the USFS in wildlife management and hunting/development permits. Land use changes adjacent to National Forests require State, US Forest Service, and County approval to proceed.

COUNTY or LOCAL

Stricter zoning ordinances and laws pertaining to open space conservation and housing developments are passed in several of the Western Slope counties in and around the Forest.

Moratoriums on outdoor burnings have been put into effect for certain populated valleys on the western slope.

County, State, and Federal laws concerning the school systems in the nation have been modified to include more of an emphasis on environmental education. Environmental education is being taught with equal emphasis to the old standbys of reading, writing, and arithmetic.

WORLD FUTURE - 2030

In the year 2030, the average person on this planet has become much more aware and concerned with the importance of nurturing balance in the natural environment, opposed to the average person of the pre- twenty-first century who was more concerned with the exploitive possibilities of the natural environment. What led up to this change in ecologic values was a series of collapses in certain biologic communities. Eco-disasters happening in the 60's, 70's, and 80's, (Love Canal, Kiev nuclear power plant, ozone deterioration, and acid rain), began to happen more frequently in the 90's and early parts of the twenty-first century. Soon after the turn of the twenty-first century, there were a series of great environmental catastrophies which had global impacts. These breakdowns in certain ecologic communities finally united peoples throughout the world into changing their moral value systems regarding environmental issues. Environmental quality concerns have become major world wide political issues and no longer take a backseat to avaricious political interests.

People have finally realized that the environment is a real and fragile phenomenon which has to be protected and managed for the good health of a global human society. The world community realizes that it is not separate or apart from the natural environment but integrally linked to and dependent upon it. All humans have come closer to understanding their responsibility to the land.

The State of Colorado looks much different now than it did in the year 1980. By the year 2030, the population level along the Front Range of Colorado has reached the six million mark. Fort Collins, Boulder, Denver, Colorado Springs, and Pueblo have doubled in size from what they were in 1980's. The suburbs of these cities have all but grown together and fused into one large megalopolis similar in extent and character to the large urbanized areas of the east and west coasts. These Front Range cities are as "high-tech" as ever before. Millions of people live and work in these cities where computers rule, business is king, and money talks. On the opposite end of that lifestyle is the Western Slope area, where life continues to be simple and less hectic. More and more human pressures and demands have been put on the State's natural resources. The Western Slope population levels have fluctuated quite a bit during the course of the last fifty years - mainly due to several boom/bust mining operations (oil-shale), but remain scant when compared to the Front Range urban areas.

The Front Range forests of Colorado have had the most user pressures because of their proximity and easy accessibility from the large metro areas. However, even the more remote forests of Colorado's Western Slope have to cope with increased public demands in the year 2030. This increase came in the form of recreation, and is partially attributable to the desires of Front Range residents to escape the stressful city life and enjoy a relaxing trip to the Western Slope. In general, these tourists are welcomed by the West Slope locals to visit, but not stay. There is an increasing number of West Slope residents who accept the notion that retaining a relatively stable economy based on agriculture and tourism is saner and safer than being victims of big boom promises that continually fail.

Even a casual visitor to the Grand Mesa, Uncompahgre, and Gunnison National Forest will notice a change in the landscape character upon approaching it from the eastern Front Range cities. He or she first has to drive over and through the Front Range forests which cover the Continental Divide. While travelling through them, one notices a commercial and developed character about this environment. The roadsides are filled with advertisements for various forms of cheap (low quality) recreational activities, aimed at capturing the tourist dollar. Many West Slope locals joke about this "urban forest" environment. However, the landscape character begins to change dramatically after passing through the town of Glenwood Springs on I-70 and upon cresting over Monarch Pass on Highway 50. This change is very distinct to even a casual visitor. The forest-covered mountains and beautiful scenery are immediately obvious in their contrast to the surrounding high desert landscape. More important, one senses an integrity to the entire landscape, the kind of integrity that results from carefully planned decisions. In the Front Range urban corridor and adjacent forests, man and his developments are the dominant features. But forty years of cooperation among the Forest Service, the State of Colorado, and some ten counties in the area have managed to keep development in harmony with the most important feature of the region - the natural character of the Grand Mesa, Uncompahgre, and Gunnison National Forest.

RECREATION & RECREATION - 2030

The biggest change in the recreation resource on the Forest has been the establishment of a "National Heritage Reserve" which includes most of the Forest. This land classification is similar to and modeled after the old Forest Service (National Recreation Area) and United Nation (biosphere reserve) concepts. This huge "National Heritage Reserve" was set up to cover the Four Corners area of southeast Utah, northeast Arizona, northwest New Mexico, and southwest Colorado. The Grand Mesa, Uncompahgre, and Gunnison National Forest fell within the northeastern corner of this Reserve.

The citizens and communities of west-central Colorado had decided long ago to retain and foster a "western" image for their region. They wanted the westcentral Colorado landscape to portray a rustic "western cowboy" image to the general public, in an effort to attract people from the state, national, and international tourist markets. The old USFS and BLM lands were an integral part in achieving this goal because of the vast amount of acreages they covered in this section of the state. State, County, and Forest planners worked together in formulating plans to set up this Reserve, which gave the Forest and counties legal strength to work with developers in setting aside and conserving tracts of land in order preserve parts of west central Colorado's frontier heritage. This was accomplished through a variety of land conservation techniques, some of which are listed below:

-- USFS land exchange programs.

-- USFS purchasing of private lands within Forest boundaries.

-- Purchasing of scenic and conservation easements.

-- Transfer of Development Rights (TDR).

-- Purchase of Development Rights (PDR).

-- Establishment of tax-exempt funds and trusts earmarked for natural resource conservation, protection, and preservation.

Some of the reasons for setting up this National Heritage Reserve are as follows:

-- Forest and County planners in collaboration with local citizen groups, began devising a strategy to attract tourists and recreation enthusiasts to west central Colorado. What was unique to this Forest and surrounding lands that had historically attracted people to visit this part of the world? Their thought was that people have been attracted to visit west central Colorado because of its scenic beauty, uncrowded and unpolluted environment, and "wild west" character. So, why not push to protect and promote these indigenous amenities? And what better way to protect these amenities than by the creation of a Natural Heritage Reserve.

-- Their thoughts were to try and preserve some of the last areas in the state, which still retained their original "old west" character. And some of these last remaining areas could still be found in and around the Grand Mesa, Uncompahgre, and Gunnison National Forest. Large parts of the Grand Mesa, Uncompahgre, & Gunnison, the San Juan, and the Rio Grande National Forests still retained some of this wild, original Rocky Mountain forest character. Most of the lands administered by the above-mentioned three Forests fell within the newly-created Natural Heritage Reserve. The intent of the creation of the Natural Heritage Reserve was to help protect the landscape's "old west" character before commercialization and private development got out of hand, as it already had in certain areas along the front range "urban forests". It did so by using an administrative modification of the old Colorado Joint Review Process, established in the 1970's to coordinate policy and permit review between all levels of government and interests when large scale developments such as oil shale were proposed.

-- There are several large urban areas within quick and easy access to west central Colorado. They are the Denver area (180 air miles), Salt Lake City area (260 air miles), Phoenix area (425 air miles), and Dallas-Fort Worth area (730 air miles). The people dwelling in these and surrounding megalopolises need places to recreate and rejuvenate their spirits from the stressful city environments of the year 2030. Also, most of these urban dwellers by this year suffer from some sort of medical problems due to boredom. Boredom is the major medical problem in the year 2030 (Selzer, 1987). As leisure time increased, life got more and more mechanized, people became bored - and that created many health problems. West central Colorado's forest environments now act as therapeutic getaways for the urban dwellers. Most of these urban dwellers need some sort of uncrowded and untrammeled natural environment to which they could periodically escape. The Forest environment of west central Colorado was this oasis.

-- A lot of people questioned - why an "old West" Colorado theme? Well, for one thing, it is what the West Slope of Colorado does best. It is ingrained in the area, a part of its heritage. The locals live the life style which fits the character of the land. The thought in the back of many Americans' minds was a secret yearning to go back into the past, and live in the adventurous days of the Old West, but only for a short period of time. The possibility of living the life of the "rugged individual", all but lost in the urbanized world, still existed on the Forest and surrounding public lands. What better way to do this than a short vacation or trip to the forest environment of west central Colorado? Part of this theory is borne out in the better-than-ever selling Louis Lamour western novels (Leerhsen, 1986). People from all over the world enjoy watching the "John Wayne" western movies. As of 1987, the Forest had been a backdrop for six major western films produced in Hollywood. The Forest has also been a backdrop for several TV commercials and magazine ads for the mythical western "Marlboro Man".

By the year 2030, most of the Forests in Region Two were not cutting the volume of timber they did in the 60's, 70's, and 80's. This was partly due to the better organized international lumber market. Lumber from trees imported from Brazil, Canada, and other parts of the world would grow faster, healthier, and revegetate better than indigenous trees from west central Colorado. Domestically, repeated battles between "environmentalists" and timber companies in the 1980's and early 90's - including costly law suits and occasional "monkey-wrenching" - have led to more timber being grown on privately-owned tree farms. Reduced timber cutting was also due to a shift in Regional goals and emphasis for the Rocky Mountain States. This Region had shifted its emphasis from commodity driven activities to recreational dominated activities. The Region had a preview of this happening in the 70's, when the then Regional Forester Craig Rupp publicly stated that "Region 2's land base is best suited for emphasizing recreation rather than timber commodities". On this Forest, the only timber harvesting allowed (with one exception) was for recreation, visuals, wildlife, water or insect management. Forestry was regarded as an integral tool in the management of the above-mentioned resources. However, the timber generated from these sales was regarded by the Forest Service as strictly a by-product from the treatments. 90% of the Forest was in a "no-cut, natural" zone both to protect scenic areas and because the timber could still not be harvested economically under sound environmental practices.

By the year 2030 natural fires play a much greater role in the natural scheme of things, similar to the role it played in pre-Smokey-the-Bear days. Burned-out areas, left after a natural fire went through, dictated where some salvage logging could take place. Naturally caused fires were easier to allow to burn, largely due to the fact that the Forest lands have become a much more cohesive unit. They are more cohesive because of the intensive USFS program, set up in the late 90's to get rid of private inholdings on the Forest. With few private lands and private developments on the Forest, it is easier to let these wild fires burn and let them return to being a part of natural environment. The above mentioned timber harvesting practices and concepts were all derived from the TEM or Total Ecosystem Management philosophy.

Logging and timber harvesting still occur on the Forest, but at a reduced scale from the 1980's. From a national economic standpoint, the lumber derived from the trees cut on this Forest is not significant. In this area, a few small, local timber-related industries are supported by this reduced scale of timber harvesting. Historical logging practices were highly encouraged within the Natural Heritage Reserve. Timbering by use of horse teams, cross-cut saws, and hand axes was thought to add to the nostalgic character of the Natural Heritage Reserve. Some of these historic logging methods attracted some attention from tourists visiting the area, and temporary interpretive signs have been set up at these sales to satisfy their inquisitive minds.

Within the Forest boundaries there is another type of timber classification set up under Timber Management, and that is the "Intensive Logging" areas. These intensive logging areas are managed as the name implies. Current modern technology is used in setting up the sales and harvesting trees in a

controlled, plantation-like setting. They are similar in management and appearance to some of the tree farms on private woodlots back East. They only amount to approximately 5% of the total Forest's land base, or 150,000 acres. There are not too many of these areas on the Forest due to the species and slow growth characteristics of the trees in this area, as well as the overriding of "National Heritage Reserve" management objectives in place.

The cattle and sheep business are long time historical economies in the west central area of Colorado. They were in existence years before the original Forest Reserves were established in this area in 1892. These local industries have existed together for a long time in this area although seldom in peace or harmony. Some of the fabled cattleman vs. sheepman wars of the 1880's took place in this area. As recently as 1917, two men were killed over a cattle vs. sheep dispute.

The cattle and sheep business have had their ups and downs, economically speaking, ever since the first herd of cattle was driven into the area. By the 1980's the local ranching business had been hard hit by the economic conditions of the times. In addition, a lot of people complained that the local cattle and sheep industries were subsidized by the Federal Government and were destructive to "public" ecosystems. The amount of beef raised on this Forest amounts to very little of the National total for red meat production. In other words, the meat in the hamburgers eaten at McDonalds was not produced on this Forest, but probably in a feedlot in the Midwest or the South. The Southern states (feedlots) produce more beef than any other region in the United States (Ferguson, 1983). The cattle and sheep business associated with grazing on this Forest has followed a path in similarity to the local timber industry.

Many of the old cattle and sheep allotments have been abandoned on the Forest and their improvements removed. Miles and miles of barbed wire fences and stock driveways have been removed and obliterated in an effort to unclutter the Forest landscape from these developments. There is a special emphasis to remove grazing allotments from wilderness areas for various reasons which will be explained later in the section on "wilderness and recreation".

The grazing of cattle and sheep still takes place on this Forest but in a much reduced fashion from the 1980's. By the year 2030, Herefords have been replaced by buffalo and deer. A few ranchers are raising beefalo and the old Texas Longhorn cattle. The grazing of certain breeds of semi-domesticated stock on the Forest is thought to add to the "Wild West" character of the Forest and surrounding lands. Advantages to raising some of these semi-domesticated types of stock are twofold. First of all, they seem to be less harsh on the natural environment (as well as requiring less attention from ranchers). And secondly, the meat they produce is avidly sold as a novelty in many supermarkets throughout the country. Many of the ranchers and cowhands who work in the area are dressed in the 1890's fashion while out riding the range. In fact, there are a lot of people from large eastern cities who actually will pay the ranch owners large sums of money to come out and work stock on their allotments for the summer season or longer.

In the year 2030, grazing on the Forest has actually turned into a more recreation-related enterprise than anyone had ever expected. For a tourist visiting this Forest from back East or industrialized Europe, there is nothing more exciting than to come across a group of cowboys, dressed in the old

western style, herding cattle or buffalo down a little-used Forest road. The grazing of stock on National Forest lands has changed considerably from the 1980's, but is still an integral part to the overall "Western Image" characteristic associated with the Natural Heritage Reserve.

The biggest change in the management of wildlife on the Forest was that nongame and rare/endangered species were given equal status and importance in terms of funding, study, and significance as the traditional big game species of deer and elk. In fact, there has been a concerted effort between the Forest Service, US Fish and Wildlife Service, and Colorado Division of Wildlife to re-establish certain types of threatened and/or endangered wildlife species back to their original environments on the Forest. This concept is practical in today's world, mostly due to the combination of old resource agencies of the BLM and the USFS. This provided for larger, more cohesive land units on which these migratory animals could roam. Also, additions to and expansions of wilderness areas on the Forest helped provide more undisturbed tracts of land for some of these privacy-seeking animal species. Many visitors came from other States and abroad to observe, in a natural state, some of these rare/endangered species. Of course the guided viewing of some of these animal species was strictly controlled in order not to disturb them. Very few of these rare/endangered species existed in the Front Range forests because of development and urbanization pressures. This Forest and others located within the newly-established Four Corners Natural Heritage Reserve were known throughout the country for their pristine and primitive natural environment which housed many of the nations rare/endangered species. Animals requiring vast acreages of privacy and undeveloped lands had found a home in this area. Species such as the wolf, grizzly bear, and wolverine had all been reintroduced to this area, due in part to reduced objections from ranchers who are devoting less time and money to sheep and cattle operations.

Hunting still continues on the Forest but not in the fashion as it did in the 50's, 60's and 70's. It is no longer thought of as a big beer party out in the woods, or as a macho sort of power-trip, but more as an ecologic undertaking to cull natural game animals in order to keep them in balance with their environment. However, with the re-establishment of several types of rare predatory animals on the Forest, there was less of a need for humans to thin out the deer and elk populations. As a consequence of this, human hunting activities had been reduced on the Forest. Private land hunting, although more expensive, took up some of this slack and contributed to the economy.

For sportsmen, there is no substitute for killing a deer or catching a fish, but probably as many people click a shutter as pull a trigger in the year 2030. Other visitors come to the Forest for birding and nature study. The inherent conflict between the two groups continues, but the Forest tries to minimize it by designating more natural areas on the one hand, and intensive game-management areas, such as recently cut timberlands, on the other. Some of the nongame wildlife programs are funded by tourists visiting the Forest for photographic and nature study trips. Europeans and other peoples from large urban areas spend huge sums of money to hire local outfitter guides who are equipped for handling photographic hunting excursions into the woods. Europeans, in particular, enjoy observing wildlife on the National Forests since the native wild game populations in their own countries had long ago been decimated by civilization.

Wilderness, along with the other recreational pursuits mentioned in previous chapters, has its fascination, and is still the center of much controversy. Values have changed, but the notion of designating an area to "go to seed" or "waste" still outrages many, just as the knowledge that some small corner of the world will remain untouched and unspoiled comforts others. By the year 2030, the old existing wildernesses of the 1980's had been expanded upon and added to. Some of the reasons for this increase in wilderness acreage on the Forest are listed below.

The 1970's, 80's, and 90's, saw the forests nation-wide involved with more and more lawsuits concerning appeals over environmental issues. These court cases became more and more expensive for the Forest Service and thusly the taxpayers of this country. Concern over how National Forest budgets are being spent was being put more under a microscope than ever before by the general public. Because of the lawsuits, a tremendous amount of the Forest's budget was being tied up in planning and litigation proceedings. Less and less was getting done out in the field. So the thought was, why fight these public desires? By the year 2030, the amount of wilderness and semi-primitive non-motorized areas on this Forest had been expanded to more than half of the total Forest acreage (roughly 75%). This was done for a variety of reasons, one being that the combination of the wilderness and semi-primitive areas were very inexpensive to manage and operate when compared to other land classifications on the Forest. For example, in the 1980's and 90's, timber sales, road construction, grazing developments, and developed recreation activities had become very expensive undertakings on the Forest. Secondly, because these areas were not open to much development, they were less contoversial in nature to the general public and less likely to end up in long drawn-out court cases. Thirdly, this increased wilderness and semi-primitive acreage provided more opportunities for meeting the increased demand of dispersed recreation type activities on the Forest. Finally, restrictions in National Parks had become so tight that public demand supported designation of less fettered backcountry opportunities.

With roughly 75% of the Forest in some sort of wilderness or semi-primitive type land classification, some people at first argued that the Forest would not be able to meet the other multiple-use demands that society placed on it. This was successfully put to rest by permitting environmentally sensitive high-tech resource development technology to operate on the remaining 25% (750,000 acres) of the Forest located in the intensive management zones. The fees charged for wilderness or near-wilderness use covered both the cost of management and lost production opportunity costs. The designated wildernesses are more expensive to use, since all chance of timber income is foregone. The Forest allows a few developments to take place in wilderness areas, (with the exception of ultra-wilderness areas) on a very limited basis. Surprisingly, not too many people were upset by this intervening clause in the new wilderness legislation, due mainly to advancements made in the land reclamation field. By the year 2030, even major land-disturbing activities could be mitigated, to almost everyone's satisfaction, and accomplished within a short period of time.

RECREATION LAND CLASSIFICATIONS - 2030

Different types of land classifications for recreational purposes have been established by the year 2030. We will look at them a little more closely in this section.

Intensive Management Areas

This area covers approximately 25% of the Forest or 750,000 acres. Activities included in these areas cover most of the multiple-use activities associated with the Forest in the 1980's. Some of these higher impact activities include logging, roading, grazing improvements, water impoundments, and developed recreation activities. However, these activities are more centralized and done to a more intensive level than in the 1980's. Intensive forestry activities include: tree farming, experimental forests, tree plantation farms, and cultivation of "super trees." Grazing activities include: fencing, stock road development, and stock ponds. Developed recreation activities included: developed campgrounds, ORV usage, snowmobiling, and downhill ski resorts.

Semi-Primitive Non-Motorized Areas

This area covers approximately 35% of the Forest or 1,050,000 acres. These areas are similar in character to the old semi-primitive non-motorized recreation opportunity setting (ROS) classification of the 1980's. The main types of recreational activities taking place in these areas are dispersed in nature. These "low-intensity areas" differ from designated wilderness areas in one respect only. At the conclusion of long rotations, the prime timber is selectively logged, the area redesignated as a general forest-management unit, and another area, set aside for the purpose years before, is selected to replace it. These rotating near wildernesses are favored by some, who find that the remains of logging roads make access easier, and travel is not made treacherous by blow-downs and burn areas thick with brush. The character of the old-growth timber and the degree of privacy and solitude meet the needs of many. Other multiple-use activities sometimes occur in these areas on a very limited basis. This exception to the rule is due to the fact that these semi-primitive type areas usually surround the intensive management areas thus there is sometimes a spillover of development type activities.

Wilderness Areas

This area covers approximately 25% of the Forest or 750,000 acres. This land classification is similar in character to the designated wilderness areas on the Forest in the 1980's. One main difference to these areas, can be attributed to one of the interchange programs which combined USFS and BLM lands. When this happened, BLM wilderness areas were combined with USFS wilderness areas. In many cases this provided for an enlarged wilderness area which included within its boundaries different eco-types ranging from the desert, semi-desert, montane, and all the way up to alpine. Previously, in the

1980's, Forest wilderness areas only included the scenic high-altitude alpine lands. Because of their fragile nature these areas suffered severe abuse and damage from being the focus or destination of visitor use.

Ultra-Wilderness Areas

This area covers approximately 15% of the Forest or 450,000 acres. Ultra-wilderness is the epitome of the word wilderness. It is a land where nature rules, one hundred percent, and man is an infrequent visitor at best. The closest land-type character in the USA in the 1980's, which could be compared to today's ultra-wilderness areas, were some of the large wilderness areas located up in the State of Alaska. This wilderness classification is the most primitive and wild of all the other before-mentioned wilderness designations.

These ultra-wilderness areas were made up of some of the more pristine parts of existing wilderness areas within the State. All of the old domestic grazing allotments within these areas had been phased out over time, and the improvements removed. Their use by people is strictly controlled by the Forest Service. In fact, one has to be licensed and pass an oral and written exam before entering these areas. Man is a complete visitor here and takes his chances in survival along with the rest of the animals who inhabit this wildest of wild domain. If a person is injured or killed in one of these areas it is his or her tough luck. There are no exceptions to the rules of allowing motorized equipment or helicopters to land or use these areas. It is also illegal for any type of aircraft to fly over these areas. These regulations are similar to FAA rules and regulations about flying over military reservations. This environment is the closest thing to a completely natural environment as exists in North America. Predatory animals such as grizzly bears, wolves, and wolverines have all been re-introduced into these areas which they once frequented as recently as one hundred years ago. Game, such as deer and elk, are managed in and around these areas to try and hold some of the predatory animals inplace, the theory being that if deer and elk are kept available in these areas then the predators would not wander too far away from where their food supply is located. Very little information in the way of maps and information is dispensed to the general public covering these areas. Too much information would spoil the intrigue and adventure of entering this country. There are a surprisingly large number of people putting in for permits, but this demand is strictly controlled in order to respect the environment of the wild animals living within these areas. Occasionally the Forest permits the filming of a wildlife documentary special to take place. These special use permits are fairly expensive for the film companies to purchase. These permit fees are put back into managing and administering these ultra-wilderness areas.

CHAPTER 6

SUMMARY

CHAPTER - VI

SUMMARY

Whimsical, fanciful, extravagant futurizing? All these words could be used to describe the preceding report. But many aspects of this predicted Forest "vision" are based on a study, finding, or initiative being developed today on the Forest. The author advances these to illustrate the opportunities for imaginative management, sensitive to the special features of the Forest and the needs of its Region.

The author is convinced that this Forest faces in the near future some very difficult choices about resource use. Trends in the air concerning water diversion projects, increased recreation use, demand for timber, and energy needs are already close at hand. Local economies have been and will continue to be directly dependent on management policies. Differences will have to be resolved together.

The Grand Mesa, Uncompahgre, and Gunnison National Forest of the future may not resemble the visions presented here. But they are not likely to resemble the future as depicted in the Forest plans either. The future is not a straightforward march to a long established objective, but many waverings with frequent mid-course corrections (Shands, Healy, 1977). The author feels that it is better to have the fate of the Forest molded in accordance with a vision of the future, rather than reacting to isolated and special pressures as they may arise.

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